Belen to Santa Fe Commuter Rail Project
Overview and Status of Project Elements
April 11, 2005

The *"Doodlebug"* or *"La Marranita"* Service Between Belen & Albuquerque 1934 - 1968

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Overview:

In August of 2003 Governor Bill Richardson announced that his administration was going to pursue the implementation of commuter rail between Belen and Santa Fe. To kick this effort off the Governor provided the New Mexico Department of Transportation (NMDOT) and the MRCOG with grants of $1 million to begin the implementation. In September of that same year the New Mexico State Legislature convened in special session and passed and the Governor signed into law House Bill 15, now referred to as Governor Richardson's Investment Partnership (GRIP); a $1.5 billion transportation improvement package. One of the projects in this bill, Section 27, A(2) was the implementation of commuter rail between Belen and Santa Fe. It is the only non-roadway capital project in the entire bill.

Responding to this legislative and executive initiative the MRCOG and the NMDOT have developed a strategy for implementing commuter rail in this corridor. The project has been divided into two phases. Phase I, which is slated for service in the Fall of 2005, includes the portion of the corridor between Belen and Bernalillo. Phase II covers the remaining portion between Bernalillo and Santa Fe. Phase II is slated for service at the end of 2008. The schedule is longer for this piece because a new track alignment will need to be constructed for the northern portion of the line and the NMDOT and MRCOG are pursuing Federal funds to help defray Phase II capital costs.

The purpose of this document is to provide an overview of the status of both Phases of this project. Since Phase I is nearer term, and most of the current activity is focused on this phase, most of the detail provided is related to Phase I. The information contained in this report has been drawn from a large number of disparate sources. There is a significant amount of detail in many of these sources that is not reproduced in this document, but is available should additional questions arise.

Commuter Rail Defined

There are many different types of rail passenger transport in service in the U.S. today. Amtrak provides long distance interstate passenger service in many corridors. Large urban areas like Los Angeles have light rail and commuter rail. Some cities utilize trolleys or cable cars. Most commuter rail operations in the U.S. are oriented toward longer distance work trips that are 15 – 100 miles in length. In order to provide travel times that are reasonably competitive with the auto, stations are generally spaced at distances in the 5-8 mile range. They typically serve bedroom communities, suburban and rural areas at the origin end, and an urban center or large employment clusters on the destination end. In the western U.S. most commuter rail services utilize diesel powered locomotives to pull commuter rail passenger cars. Figure 1 depicts a typical commuter rail train set.

Figure 1. Commuter Rail Train Set

Commuter rail stations on the origin end are often park and ride lots with a boarding platform and drop off accommodations for autos and transit. An illustration of this type of station is shown in Figure 2.

Figure 2. Commuter Rail Station

At the destination end which is often the central city or downtown core of the urban area, stations are typically more elaborate because they serve multiple lines and multiple uses. Union station in Downtown Dallas for example serves Amtrak, the Trinity Rail Express

(which is the Dallas/Fort Worth Commuter Line) and the Dallas Area Rapid Transit (DART) light rail lines.

In the western U.S. it is common for commuter rail trains to utilize the same tracks as freight trains, although several commuter rail operations such as Caltrain, and Utah Transit Authority either bought freight lines to utilize for passenger service or bought rights of way within a freight rail corridor to construct track for passenger rail service.

Commuter rail service is often confused with light rail service. Light rail operations typically serve much shorter distance trips (5-10 miles) and may have stations or stops every half mile to a mile. Light rail trains do not run on tracks carrying freight trains, and often run on tracks that run parallel to or in the middle of general purpose traffic lanes. Light rail systems are almost exclusively run by electric power supplied by overhead wires or an electrified third rail. Light rail systems are also a lot more expensive to implement, partially due to the electrical subsystems that are required to supply power to the line. Light rail systems cost on the order of $25-30 million a mile to implement. In most cases light rail systems serve more intense suburban and urban developments.

Regional Context

The Belen - Santa Fe Corridor is the center of population and the economic, financial, governmental, and educational heart of the State of New Mexico. This corridor is critical for commuters, goods, tourism, business and government for nearly one million residents and two million visitors every year. The corridor has many unique features, including connections between the Albuquerque International Airport and the State Capitol in Santa Fe; Seven Native American Pueblos are located within the corridor.

Albuquerque is part of an urbanized region stretching across four counties. As the commercial, financial and educational center of the state, the population of the region has almost doubled in the past 30 years to more than 740,000 (2002 estimate) and is predicted to increase another 40 percent, to about 1,075,000, by 2025.

In the Santa Fe metropolitan area the population has more than doubled in the same 30-year period to 142,500 and it is expected to increase another 60% to 228,000 by 2025. While Santa Fe is a major regional employment center with over 79,000 jobs, (about 21,000 of which are government jobs) the lack of affordable housing forces much of the workforce to live outside the city. The median home price in Santa Fe was $270,475 in 2003, nearly $100,000 higher than the national median. At the same time the median household income is less than the national average. This has created a significant commuter population traveling the corridor on a daily basis. Santa Fe is also a well-known tourist destination attracting between 1 and 2 million visitors each year. It is a major factor in the economy of the state.

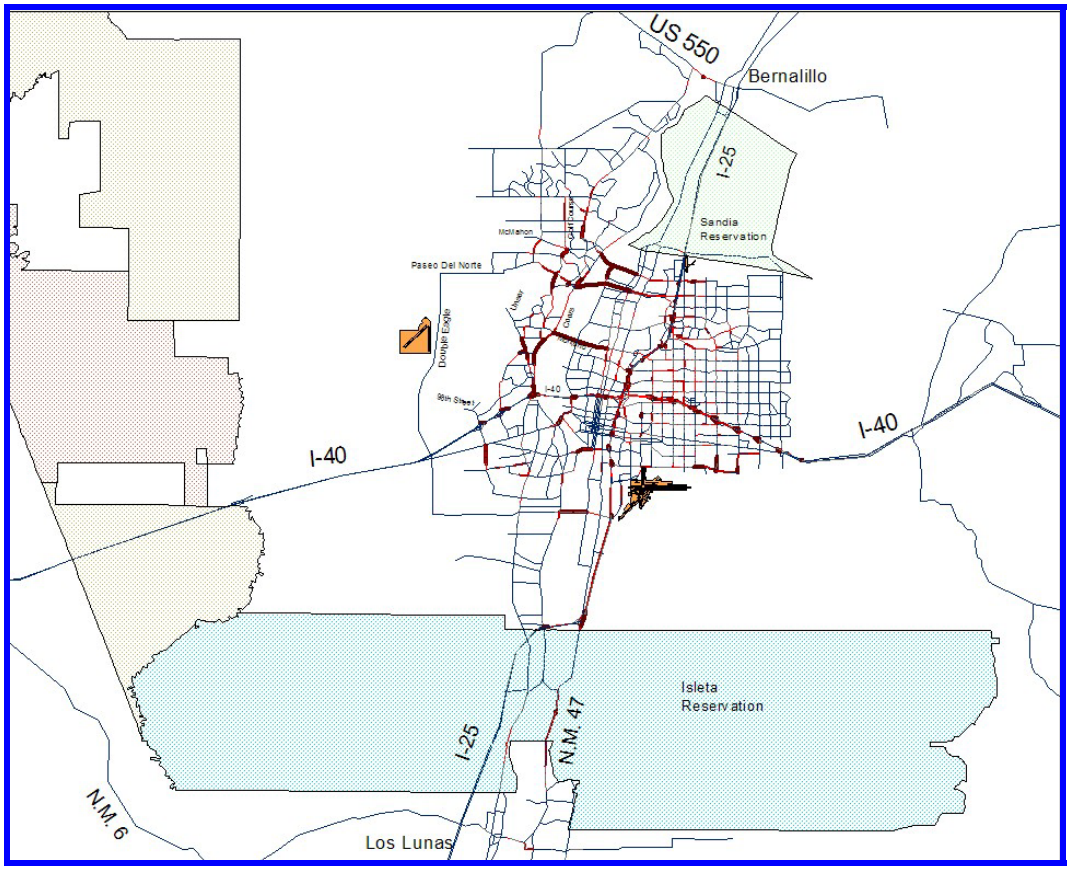
New Mexico's population (2002) was estimated at 1,855,000, with about 774,000 jobs statewide. The Albuquerque–Santa Fe corridor with 883,000 people is nearly half of the state's entire population. With over 443,000 jobs in the corridor, Albuquerque and Santa

Fe together provide nearly 60% of New Mexico's employment. By 2025, population in the corridor will grow by nearly 50% to more than 1,300,000 and under current plans, will still have but one interstate highway connecting the two metropolitan areas.

Transportation Issues in the Middle Rio Grande Valley

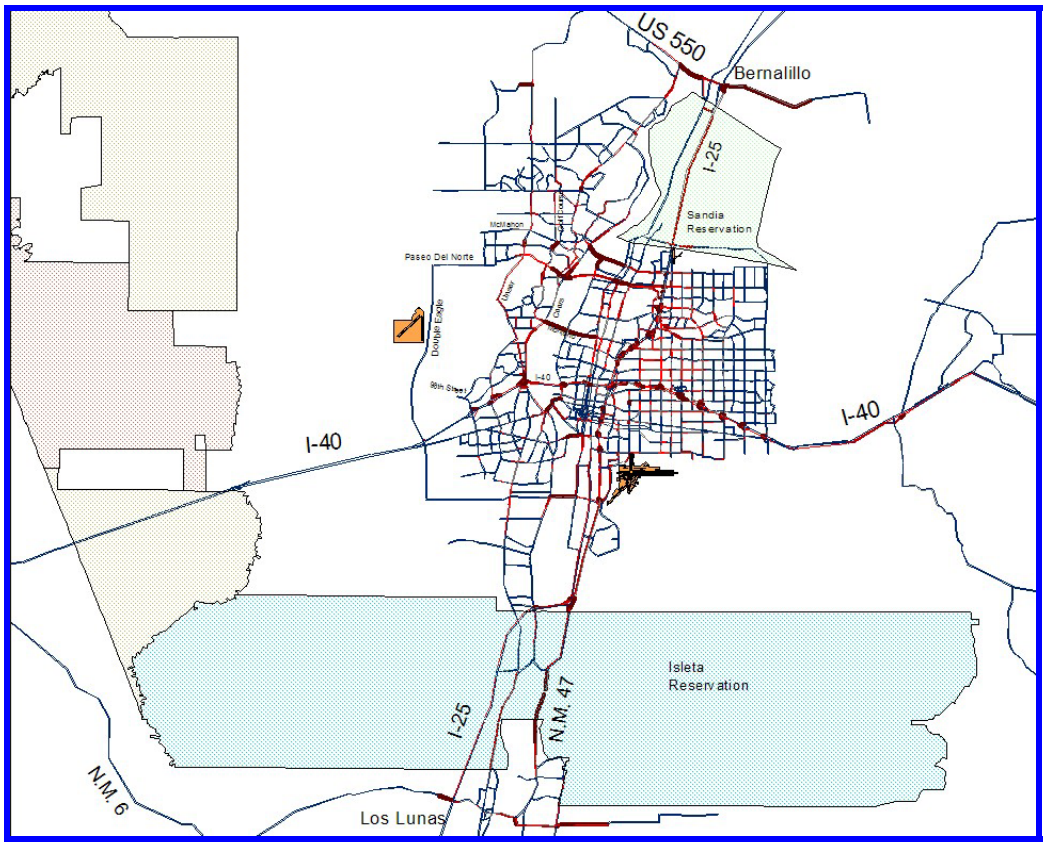
The MRCOG is the federally designated Metropolitan Planning Organization (MPO) for Bernalillo County and the southern portion of Sandoval County which includes the communities of Rio Rancho, Bernalillo, Algodones and Placitas. In addition the MRCOG is the Regional Planning Organization (RPO) for Valencia and Torrance Counties. Acting in the capacity of the MPO the MRCOG is required to produce (every three years) a Metropolitan Transportation Plan (MTP), which contains a prioritization (in five year increments) of all transportation projects over a minimum of the next 20 years. This Plan also has to be financially constrained, which means transportation revenues are projected for the time frame covered by the plan, and the sum of transportation projects and maintenance, cannot exceed expected revenues. In order to develop this Plan the MRCOG conducts a great deal of analysis to assess the performance of the transportation system at different time intervals. This is done utilizing a series of models that forecast future transportation demand based on the distribution of growth and the anticipated transportation supply. Figure 3. below shows an example of this kind of analysis.

Figure 3. Volume to Capacity Ratios on the MTP Year 2002 Roadway Network



Volume to capacity ratios are a measure of the peak hour auto volumes relative to the hourly capacity of the roadway. Roadways that are in blue have lower volume to capacity ratios and are therefore not congested during the peak hour. Roadways that are red and dark red, are roadways which were at, or over capacity in the peak hour in the Year 2002. The Year 2002 served as a base year for the current version of the MTP. The figure illustrates that the river crossings and several Westside arterials are congested as are portions of the Interstate system. The section of I-25 between Broadway (N.M. 47) and Gibson Blvd. is also experiencing some peak hour congestion. The next figure shows this same information for the Year 2010.

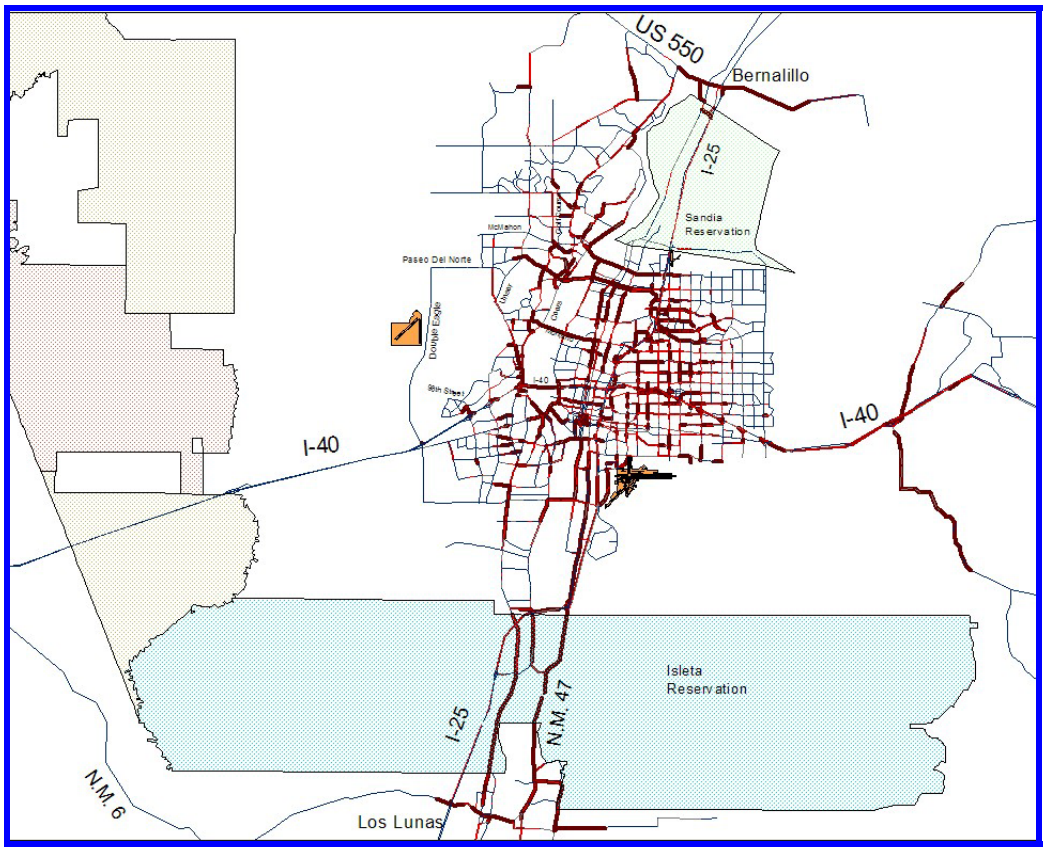
Figure 4. Volume to Capacity Ratios on the MTP Year 2010 Roadway Network



One can see in Figure 4, that despite additional roadway construction projects between now and the Year 2010, there are still many places in the region where roadways are anticipated to be congested. This is particularly true of the river crossings and on the Interstate system. I-25 is projected to be fairly congested from the N.M. 47 Interchange to Gibson, and portions of I-25 and N.M. 47 (the two key facilities that transport traffic between Bernalillo County and Valencia County) are anticipated to experience peak hour congestion through portions of the Iselta Reservation. On the northern side of Albuquerque, I-25 (the only major roadway facility connecting Bernalillo, Northern Rio Rancho and Placitas to the urban area) is anticipated to experience peak hour congestion

as are portions of U.S. 550 and N.M. 165 (the state road to Placitas). Figure 3 shows this same information for the Year 2025.

Figure 5. Volume to Capacity Ratios on the MTP Year 2025 Roadway Network



By the Year 2025 peak hour congestion in this region is anticipated to be a great deal worse than it is today, as indicated by Figure 5. All routes connecting Valencia County to the Albuquerque urban area are anticipated to be severely congested for long distances. Even the section between Rio Bravo and Gibson is congested despite the addition of lanes on I-25 between Rio Bravo and Gibson. On the north side (which assumes an additional lane on I-25 between Tramway and U.S. 550 there is still moderate congestion on I-25 but server congestion on U.S. 550 and at the U.S. 550/I-25 Interchange. It is also worth noting the Interstate and arterials adjacent to most of the activity centers in the urban area (Downtown, Uptown, Journal Center, Albuquerque International Airport, UNM/TVI and Intel) are anticipated to be congested. Keep in mind that the roadway network for the Year 2025 includes and assumes many new and capacity enhanced facilities over the base year. In fact, the capital costs of these improvements on the roadway side (in year 2002 dollars), plus the maintenance cost (for the roadway system between 2002 and 2025) is estimated at $1.9 billion in the MTP.

These figures illustrate that despite extensive expenditures on new roadway capacity, mobility in the region is expected to decline significantly over time. To translate some of this information into more understandable terms, the table below illustrates peak hour

travel times between Belen and Albuquerque and Bernalillo and Albuquerque for 2004 and the Year 2025.

Table 1. Auto Travel Times

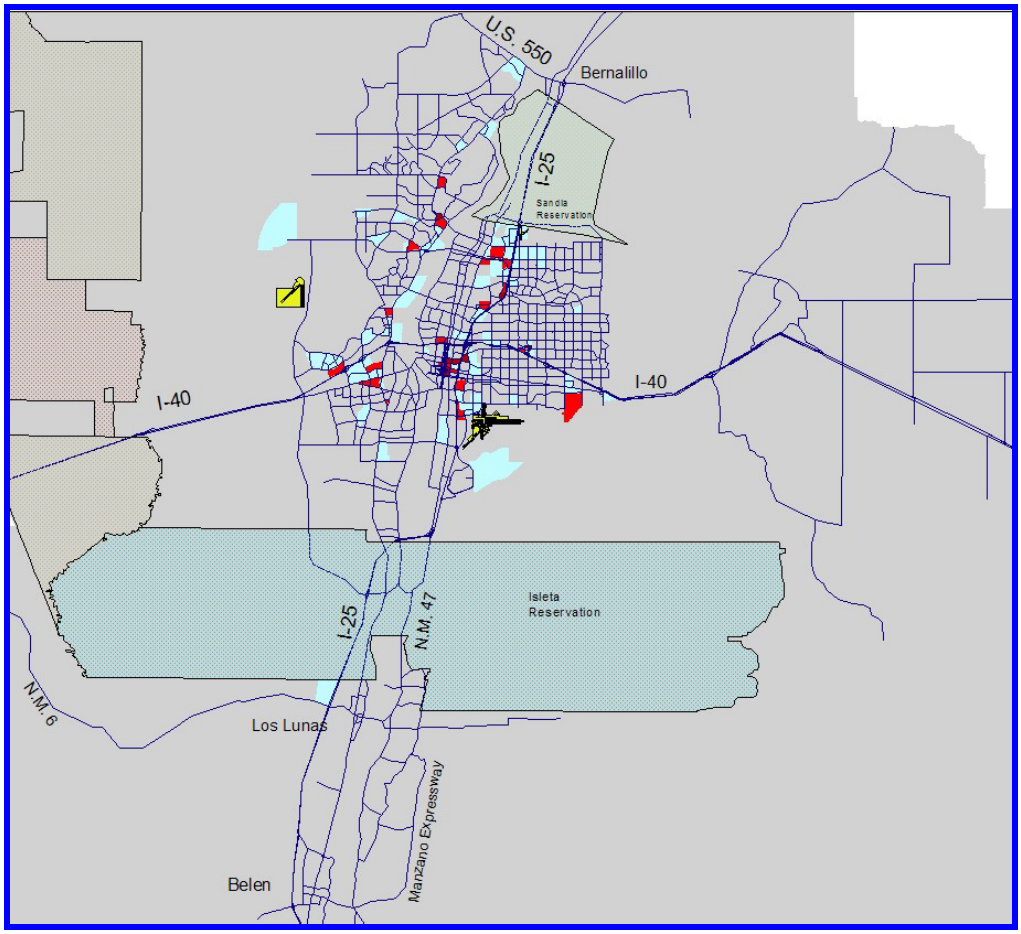
Downtown Albuquerque to Downtown Belen
Distance 34 Miles

Peak Hour	Year 2004	Year 2025	Difference
Travel Time In Minutes	45	82	37
Avg. Speed	46 mph	25 mph	21 mph

Downtown Albuquerque to Downtown Bernalillo
Distance 20 Miles

Peak Hour	2004	2025	Difference
Travel Time In Minutes	25	35	10
Avg. Speed	48 mph	34 mph	14 mph

Figure 6. Growth in Jobs Expressed in Jobs Per Acre 2002-2025



There are many factors that explain the degeneration of the region's roadway performance over time. They include growth and the distribution of growth, the costs of and the resources available to provide the necessary transportation services and infrastructure, the existence of significant environmental, physical or political obstacles in many of the critical transportation corridors, and the phenomena of generated traffic.

Figures 6 and 7 illustrate two of these factors more clearly. Figure 6 shows job growth expressed in Jobs per acre between the year 2002 and 2025. Zones colored red are anticipated to experience the most growth in jobs, followed by blue and then grey. Job growth over the next 20 years is expected to occur to a large degree within existing employment centers (Downtown, UNM, Journal Center, Uptown, the Kirtland Complex and Intel).

Figure 7. Growth in Population Expressed in Persons Per Acre 2002-2025

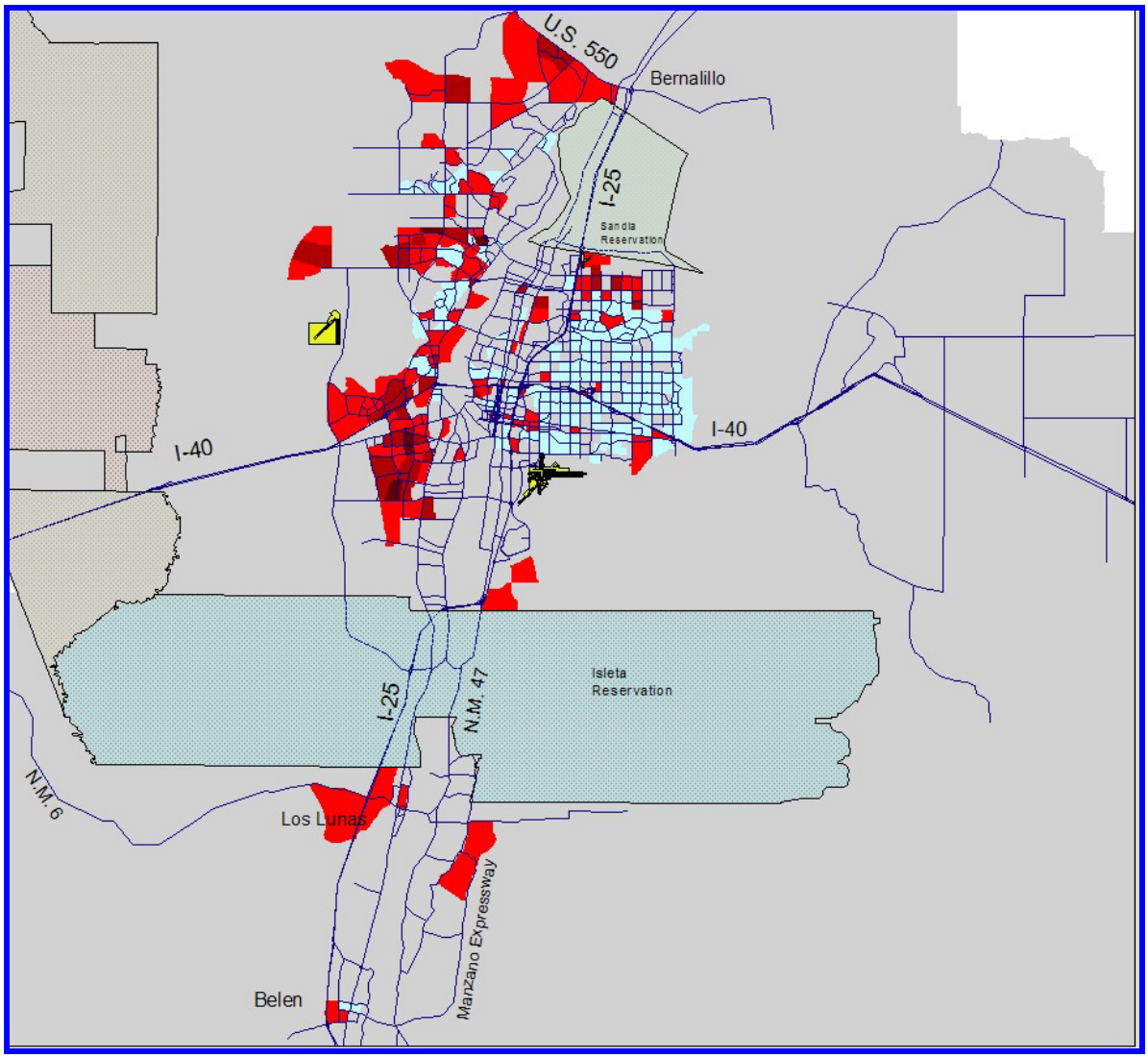


Figure 7 shows the increases in population densities between the year 2002 and 2025. While most of the new population growth expected to occur in this area over the next 20 years is located west of the Rio Grande in the northwest and southwest regions of Albuquerque, large absolute increases in population are anticipated for Valencia County (particularly in the Los Lunas and Belen areas) and in the Northern Rio Rancho, Bernalillo, Placitas area.

The north south corridor (Belen to Bernalillo) is one that is particularly vulnerable because the growing population centers of Valencia County, Bernalillo, Placitas and Northern Rio Rancho are separated from the Urban areas by the Isleta and Sandia Indian Reservations. The existing roadway options through these areas are limited and the possibility of adding new roadways or additional capacity through the reservations is even more limited still.

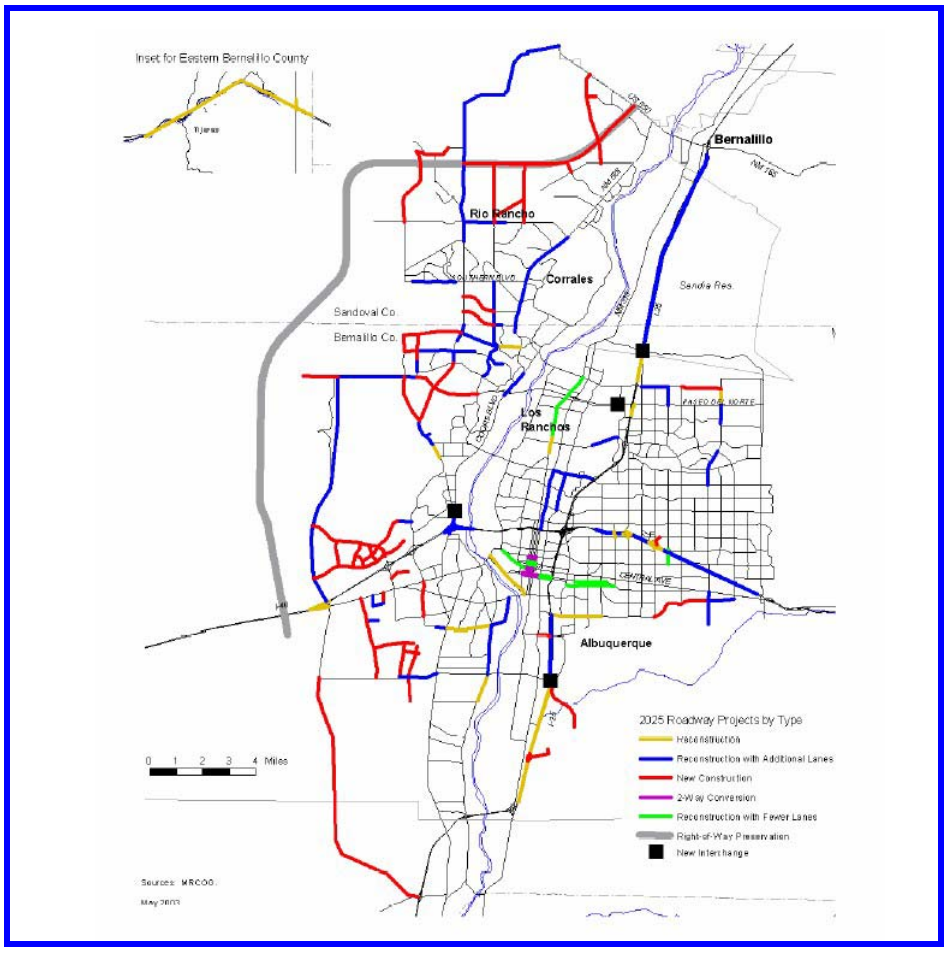
The modeling analysis done for the MTP assumes that the roadway system performs in its optimum condition. However there are many recurring phenomena that impact the performance of the roadway system. Figure 8 below shows traffic crashes in the central Albuquerque region.

Figure 8. Year 2001 Traffic Crashes in the Albuquerque Area

Dots that are larger, indicate that more crashes have occurred at the location. In the year 2001 there were 1,254 traffic crashes on I-25 between Gibson Blvd. and Tramway Blvd. These are traffic crashes reported through the State Accident Reporting System, so they do not include disabled vehicles on the side of the road, or minor incidents that are not reported. Still this translates into about 3.5 crashes per day. This portion of I-25 serves many strategic destinations including Downtown, UNM/TVI, the Kirtland Complex and the Journal Center. 2003 Average Weekday Traffic Volumes on this section range from 57,800 to 183,500. Traffic crashes on this portion of the Interstate can be extremely disruptive, especially those that occur in the peak periods. While crashes per million vehicle miles of travel are expected to decrease over time, as portions of the Interstate are reconstructed, increasing traffic volumes (and therefore vehicle miles of travel) will result in a steady increase in the total number of traffic crashes on I-25 over time. The end result will be more peak commutes disrupted by traffic crashes.

Roadway construction is another recurring activity that can limit the optimum capacity of the roadway system. Figure 9 illustrates all roadway related projects (of regional significance) included in the MTP. These projects are expected to occur between the year 2002 and the year 2025.

Figure 9. 2002-2025 Roadway Projects



The Figure illustrates that a great deal of I-25 between Broadway (N.M. 47) on the south and Bernalillo (U.S. 550) is anticipated to be reconstructed over the next 20 years. While most roadway construction projects are managed to minimize the impact on the traveling public, all projects will affect the roadways capacity to some degree; either through speed reductions, or lane reductions and in some cases both. The projects on I-25 and I-40 are not planned to occur all at the same time, leading some to perceive that the Interstate system is in a perpetual state of construction.

While this is not entirely the case, it can be said that roadway construction is another factor that needs to be considered when assessing the performance of the roadway system.

It is not easy to communicate the importance of pursuing the implementation of modes that offer an alternative to the roadway system without understanding the short and long term implications of a single mode transportation system. The Albuquerque Urban area is

not unique. It has simply reached a point in its history where road building cannot keep pace with growth and the distribution of growth in this constrained environment. A recent article in USA Today elaborates on the Texas Transportation Institute's annual report on the state of congestion in this country's urban areas:

Sprawl produces crawl: bigger cities, bigger traffic jams
USA Today, Sept. 7, 2004
WASHINGTON (AP) - Los Angeles for years has had the nation's worst traffic jams, but these days even the streets and highways in small and medium cities from Brownsville, Texas, to Anchorage, to Honolulu, Hawaii, are giving rush-hour drivers fits. Snarled traffic is costing travelers in the 85 biggest U.S. cities a whopping 3.5 billion hours a year, up from 700 million two decades ago. The problem worsened over the past two decades in small, medium and large cities, according to the Texas Transportation Institute's annual Urban Mobility Report released Tuesday. The institute, part of Texas A&M University, looked at data from 1982 to 2002.

Over that period, the study recorded the greatest leap in congestion in Dallas, from 13 hours annually in 1982 for the average peak-period traveler to 61 hours annually in 2002, and in Riverside, Calif., from nine hours annually per rush-hour traveler in 1982 to 57 hours on average in 2002. The average urban traveler was stuck in road traffic 46 hours a year in 2002, a 187% increase over the 16 hours lost in 1982. Even more startling is the decline of free-flowing traffic during rush hour. In 1982, 30% of urban highways and arteries were congested. Twenty years later, drivers were delayed on 67% of those roads. Alan Pisarski, author of "Commuting in America," said that escaping to a small city no longer means escaping from traffic. "You're beginning to see problems in places that you didn't know had problems, places you've never heard of," Pisarski said. Even in cities with the least bad congestion - Anchorage, and Brownsville, Texas - drivers lost five hours a year to traffic. In medium-sized cities such as Honolulu it was 18 hours. What's alarming is how congestion outpaces a city's ability to handle it. In 54 urban areas, traffic snarls increased 30% faster than roads could be built to alleviate them. Tim Lomax, the report's author, said the news was not all bad. Roads were built fast enough to catch up to spreading populations in some cities, such as Anchorage, New Orleans, Pittsburgh, Tampa, and Charleston, S.C. **"They've been getting worse, but they've been getting worse slower than everyone else," Lomax said. "In the bizarre world of transportation mobility, that's progress."** The report notes that major highway improvements can take 10 years to 15 years to complete. Traffic in some cities has actually gotten better - but that's because their economies have done poorly. "In a lot of the places in the past we've seen success in cities suffering job declines - Pittsburgh, Buffalo, Cleveland," Pisarski said. "Unemployment is a great solution." The biggest time-saver, according to the report, is public transit, which shaves 32% off the time drivers spend sitting bumper-to-bumper. "If public transportation service was discontinued and the riders traveled in private vehicles, the 85 urban areas would have suffered an additional 1.1 billion hours of delay in 2002," the report said. Lomax said the benefits to transit systems are in cities that are already too congested to handle more vehicles. "Typically you're in a situation where you can't handle any more transit on the roads, so public transit

becomes the way you support economic development," he said. The report is based on data from the states and the Transportation Department.

Transportation Issues in the Albuquerque to Santa Fe Corridor

This corridor has many of the same characteristics as the north south corridor between Belen and Bernalillo. The Corridor is currently served by Interstate 25, a four-lane interstate highway. **It is the only continuous roadway connecting Albuquerque and Santa Fe that directly serves both population centers**. It traverses the Pueblos of Sandia, Santa Ana, San Felipe and Santa Domingo, so expanding the capacity of the facility, or pursuing the construction of another roadway in the corridor would involve some significant challenges.

The transportation issues in this corridor are best understood in terms of its three logical sections: Interstate 25 and the two metropolitan areas at either end.

The portion of I-25 between Bernalillo (U.S. 550) and Cerrillos Road in Santa Fe is primarily rural Interstate. Traffic volumes on this section are in the order of 30,000 vehicles per day. The highest directional peak hour volumes recorded in this section by the MRCOG Traffic Surveillance Program are about 1,850 vehicles in the northbound direction during the a.m. peak hour and about 2,150 vehicles in the southbound direction during the p.m. peak hour. Directionally the Interstate can handle up to 3,000 vehicles in one hour before significant decreases in speed can be expected. This is not to imply that the current condition is desirable for many who have to make this drive. Spending an hour driving at speeds in the range of 70 to 75 mph in a traffic stream that carries 2100 vehicles per hour, can be tense, tedious, and challenging but there is existing capacity on the Interstate in this section to handle the current peak hour demand, as well as peak demand for some time into the future. However, because it is the **only transportation facility** in this corridor, it is particularly vulnerable to traffic crashes, weather and other incidents that may cause even a slight disruption to the normal carrying capacity. Serious traffic crashes, often result in the closure of this facility or a reduction in the number of lanes available, marginalizing a connection that serves a large portion of the State's population and jobs. The most recent example of this kind of exposure occurred on September 8, 2004, when a cement truck overturned on I-25 between the two Interchanges in Bernalillo. This crash closed northbound I-25 for over an hour. Northbound traffic backed up over 7 miles, and traffic had to be re-routed to N.M. 313 through the town of Bernalillo.

The two urban areas at either end of this corridor provide a different set of transportation challenges. The previous section provided a great deal of information related to transportation issues in and around Albuquerque. Many of these same issues are present in Santa Fe. The core area of Santa Fe includes the renowned four hundred year old historic district with its many tourist hotels and retail shops; a significant concentration of state and local government office buildings, including the Capitol and the South Capitol complex; the Santa Fe Municipal Complex and Convention Center and Santa Fe County Courthouse and Government offices and large tracts of densely populated neighborhoods.

Figure 10. Year 2005 Employment Densities Central Santa Fe

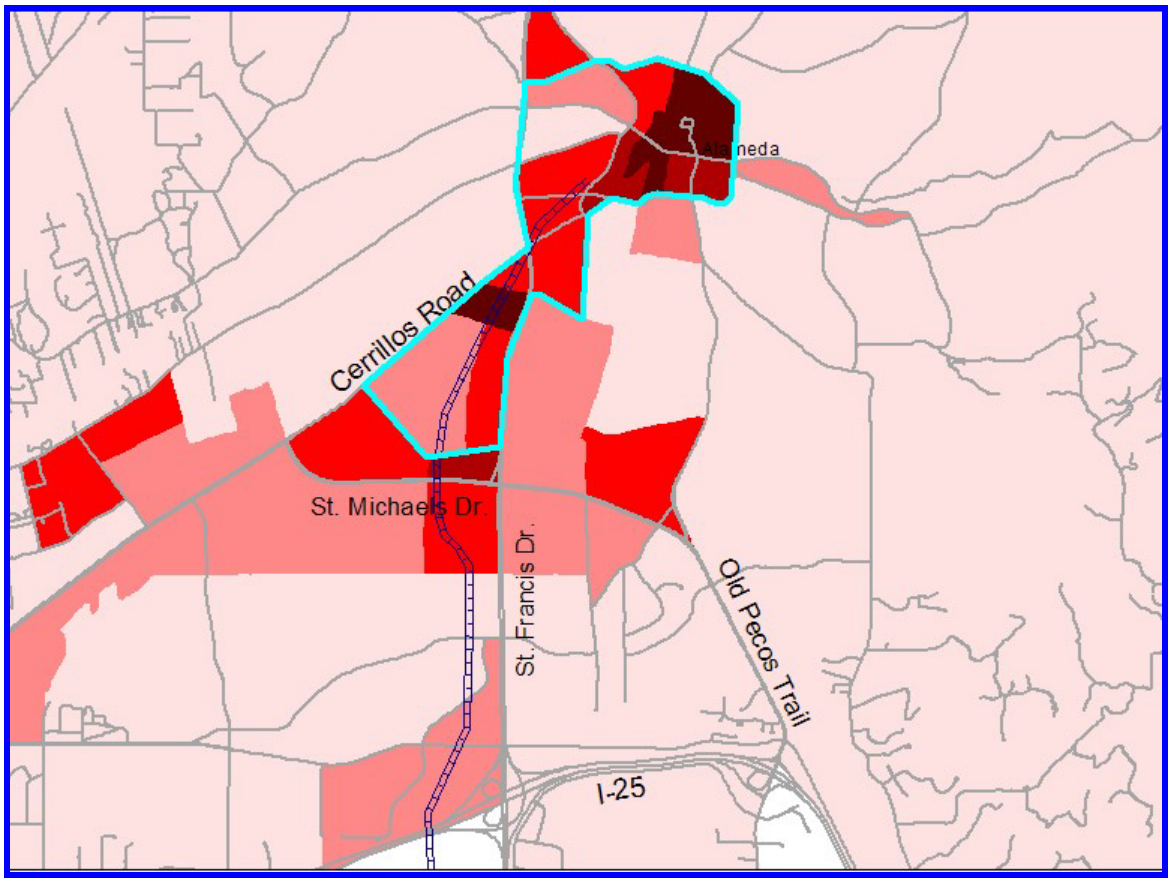
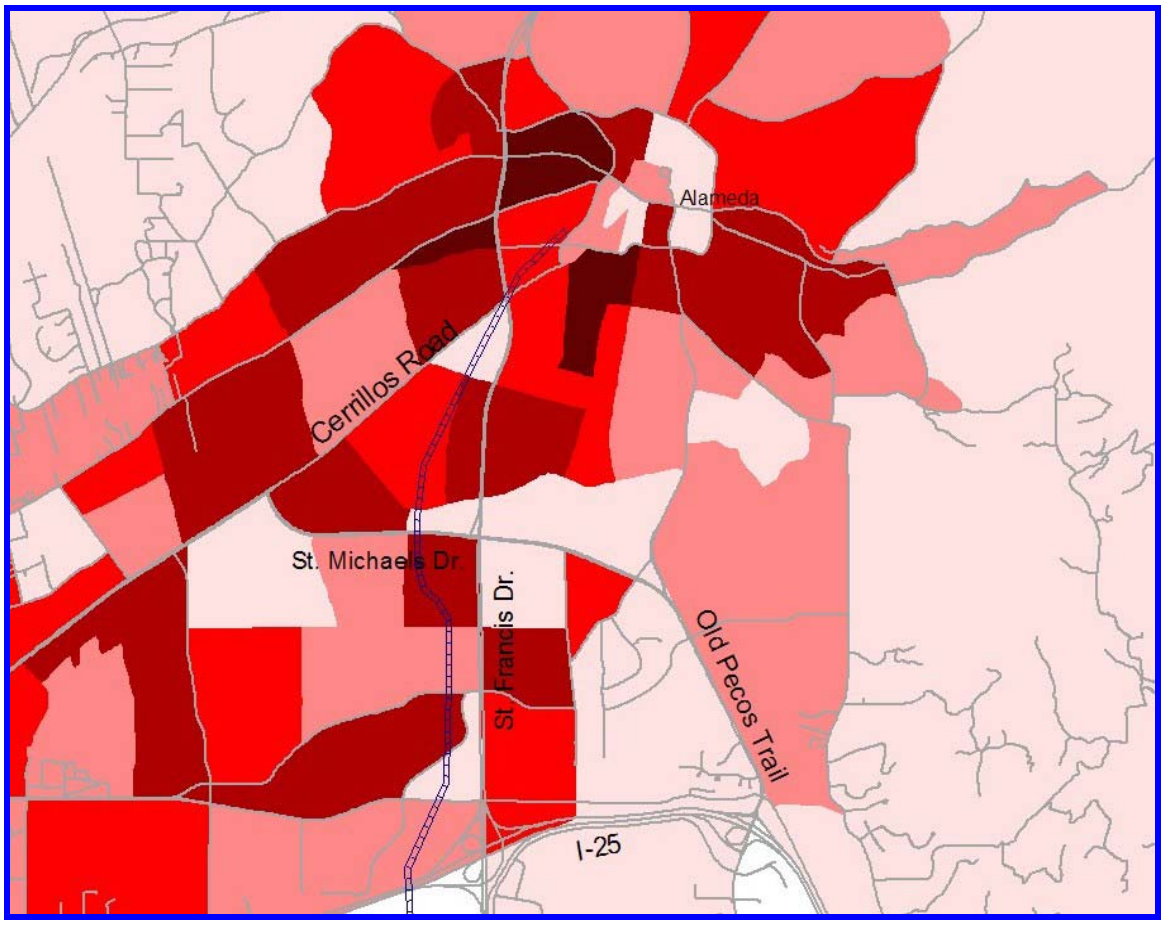


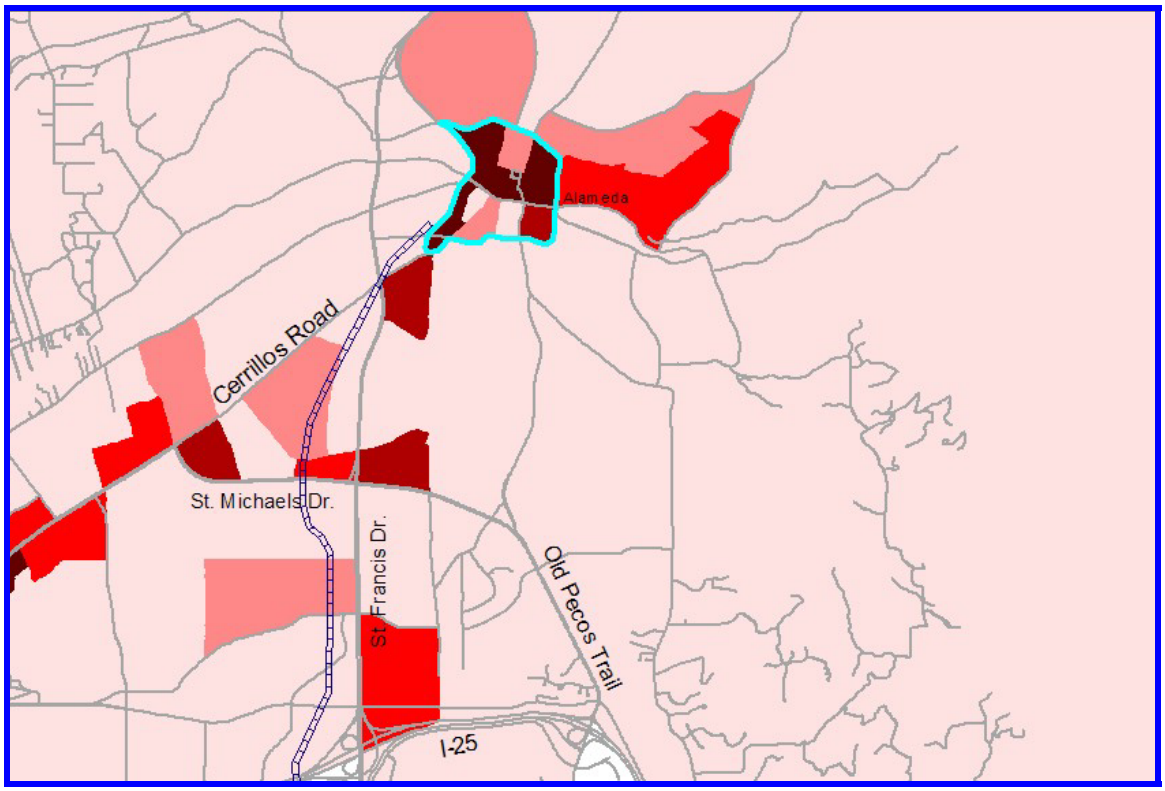
Figure 10 depicts job densities in gradients, the darker the shade of red the more job density there is in the zone. The figure also shows the existing rail line (in blue hatch parallel to St. Frances Dr.), which would be utilized by the commuter rail service. While station locations have not been identified for this phase the existing station area downtown will be the terminating point for the service and it is likely that another station will be located in the vicinity of the south capital complex. The light blue line outlines an area that would be highly accessible to these two locations. This same area contains about 18,000 jobs today. This high degree of accessibility to a concentrated area of employment is a very positive situation for the commuter rail market. Many of these jobs are located within a short walk of potential stations sites. Those that are not, could be quickly accessed a shuttle system. Figure 11 illustrates the same information for housing densities.

Figure 11. 2005 Housing Densities Central Santa Fe



Again, the darker the shade of red the greater the housing density in the zone. The figure illustrates that the denser parts of Santa Fe are highly accessible to the rail line and potential stations. While it is difficult to spatially represent the location of tourism, and all that tourism entails, hotel room densities are one indication of activity. Hotel room densities are depicted in Figure 12.

Figure 12. Hotel Room Densities in Central Santa Fe



The largest cluster (measured by density) of hotel rooms is inside the light blue polygon. There are close to 1200 hotel rooms in this area, which is really the core of historic downtown Santa Fe. All of these rooms are within one mile of the existing Downtown Santa Fe rail station.

Traveling from the rest of Santa Fe or elsewhere (Albuquerque, Northern New Mexico) to this core area is today, means utilizing a very limited arterial system (St. Francis Drive, Cerrillos Road, Old Pecos Trail) and finding adequate parking, a scarce commodity in downtown Santa Fe. Portions of St. Francis, Cerrillos Road and other roadways serving this core area are congested during the peak periods today.

Table 2. Average Weekday Traffic Volumes on Major Roadways in Santa Fe

TRAFFIC VOLUMES
(Average Weekday Traffic/24-Hours)

Roadway	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cerrillos Rd.	52,600	54,400	53,500	55,400	55,150	55,700	56,000	55,000	55,000	60,200
St. Francis Dr.	47,000	49,700	50,600	51,850	52,550	53,900	51,400	52,800	54,800	54,800
St. Michael's Dr.	39,100	36,550	37,900	38,300	38,500	39,200	40,550	40,550	40,550	40,550
Airport Rd.	30,400	30,400	31,600	31,350	35,950	36,750	37,000	37,000	37,000	30,700
Rodeo Rd.	24,750	25,300	25,800	32,500	32,500	33,600	34,600	34,600	34,600	31,700
Paseo de Peralta	26,900	27,300	27,500	27,500	27,700	27,200	27,200	27,200	27,200	27,200
Old Pecos Trail	21,100	19,900	20,200	21,700	21,100	21,200	21,800	23,400	22,700	22,750
Agua Fria	17,100	17,100	17,300	17,700	19,100	19,450	19,500	19,550	21,550	21,500
West Alameda	13,200	13,250	14,600	15,100	16,500	16,200	15,700	15,700	15,700	14,500

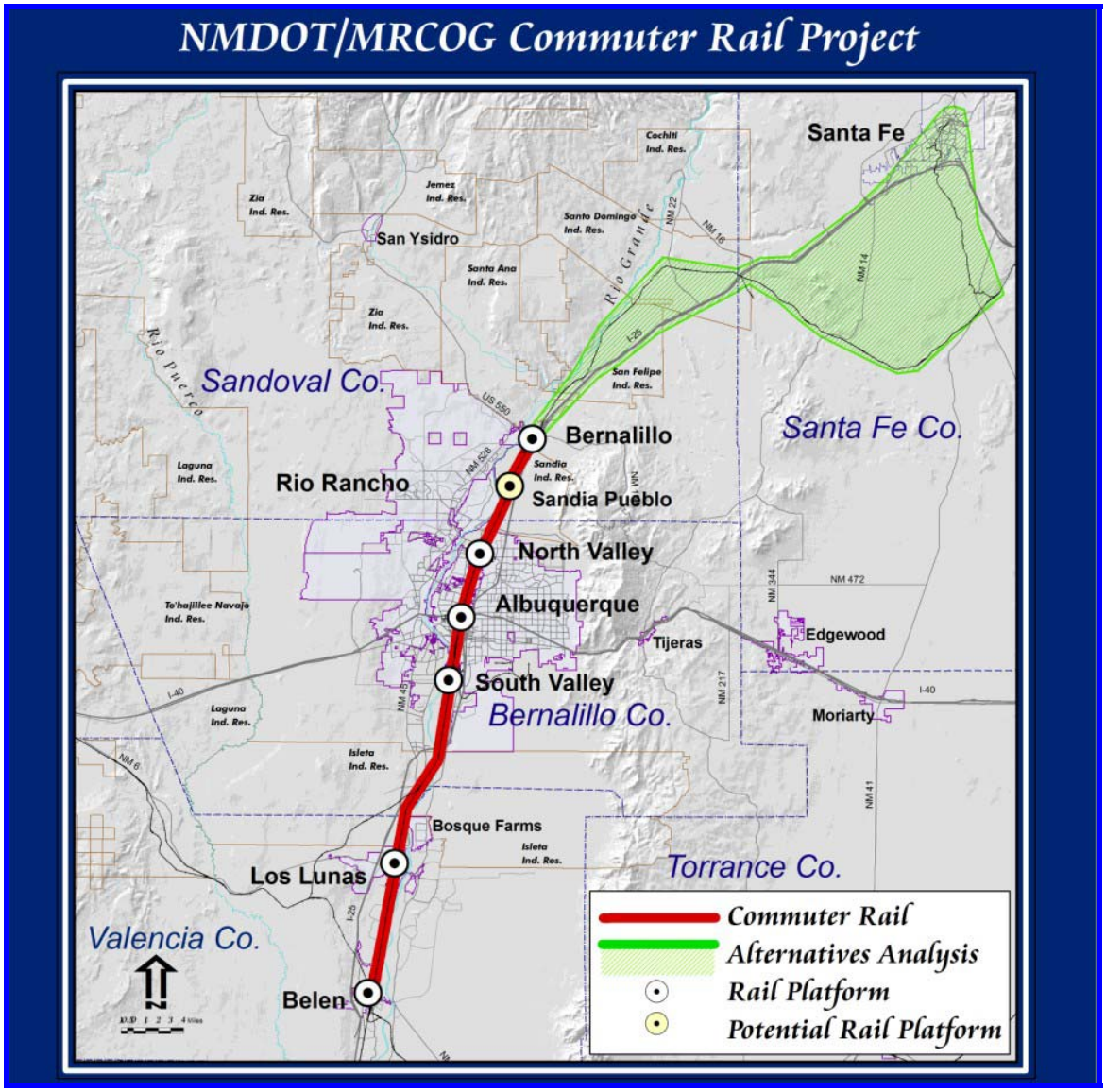
Source: City of Santa Fe Public Works Department

Table 2 illustrates Average Weekday Traffic Volumes (AWDT's) on several of the key arterials serving downtown Santa Fe. Cerrillos Road and St. Francis Drive are particularly notable because they are already carrying over 50,000 cars a day, and are the key facilities for accessing this part of Santa Fe. In addition many of these roadways are forecasted to get considerably worse over time, as Santa Fe continues to grow. There are no plans to expand roadway infrastructure around or into this core area over the next 20 years, primarily due to the historic and cultural nature of the area. Providing reasonable transportation alternatives to this part of Santa Fe is an issue that is integral to the future of the downtown Santa Fe employment, retail, and tourism markets. It will be very difficult for this area to remain as a vibrant employment center, tourist destination, retail and service center without any new transportation capacity over the next 20 years.

Commuter Rail and the Belen to Santa Fe Corridor

Implementing commuter rail in this corridor will not solve all of the issues mentioned above, but part of the reason for pursuing this venture is to implement a transportation mode that can address many of these issues in a very substantive way. First, the plan is to utilize the existing rail line for the vast majority of the corridor. For Phase I this means utilizing the Burlington Northern Santa Fe (BNSF) line starting just east of downtown Belen, proceeding north through downtown Los Lunas, Isleta Pueblo, South Albuquerque, and into the Alvarado Station in Downtown Albuquerque. The line then continues north through the North Valley of Albuquerque, Sandia Pueblo and into the center of Bernalillo. Phase I service is anticipated to terminate at a park and ride station located at the railroad tracks and U.S. 550. Phase II will utilize the existing line starting from Bernalillo northward through Santa Ana, San Felipe and Santa Domingo Pueblos. The existing line then crosses I-25 at the base of La Bajada Hill and proceeds east to Lamy where it transects the Santa Fe Southern Line which proceeds north into Downtown Santa Fe. The Santa Fe Southern Line includes a number of grades and horizontal curves that restrict train speeds in most cases to less than 20 mph. Therefore, if the existing tracks were utilized all the way to Santa Fe, the trip from Downtown Albuquerque to Downtown Santa Fe would take in excess of 2 hours. A commuter rail service based on this time frame is not likely to draw much of a customer base. Therefore new or upgraded track will be needed in a portion of this corridor. Figure 13 below includes a map of both phases.

Figure 13. Commuter Rail Corridor Map



The dark green shaded area in Phase II which is bounded by I-25 on the north, the existing BNSF line to the south and the Santa Fe Southern line on the east is the area identified for alternative track alignments. Potential new track alignments are under investigation in this area that will connect the existing BNSF line with the Existing Santa Fe Southern line somewhere south of I-25. The existing Santa Fe Southern line will be utilized from I-25 into Downtown Santa Fe.

With the exception of the new track needed for a portion of Phase II, commuter rail service can be implemented on this corridor utilizing the existing line which lies within

existing rights of way. So it does not require the acquisition of new land through any of the native communities in the corridor.

In many areas of the country (Seattle, Salt Lake City, San Jose) implementing commuter rail service on an existing freight rail line was difficult due to the large volume of freight trains already utilizing the tracks. By contrast, the rail line in this corridor has an abundance of excess capacity. Amtrak runs one train a day in each direction between Lamy and Isleta Pueblo, and the BNSF typically runs three to four sprint trains (local delivery) a day between Belen and Albuquerque, and one long haul train that traverses the entire corridor. The track in this corridor is also in relatively good shape, with most of it rated for passenger service at 79 mph. While there is a portion of the track between Belen and Isleta Pueblo that will need some signal and track improvements to improve the capacity and speed of the line, overall the situation in this corridor is very favorable for the implementation of commuter rail service. Preliminary train travel times provided by BNSF indicate that a train trip between Downtown Albuquerque and Belen will take on the order of 45 minutes including station stops. The Bernalillo to Downtown Albuquerque exchange will be on the order of 22 minutes. These travel times are about what it takes to drive between these points today during the peak period. As noted above, auto travel times are anticipated to increase significantly over time further increasing the travel time competitiveness of commuter rail. There is still a great deal of work that needs to occur on Phase II of this project so travel times are not available for the Albuquerque to Santa Fe leg yet, but it is likely that these times will be competitive with auto travel times as well.

One of the key advantages of implementing commuter rail service in this corridor, is the reliability of commuter rail travel times. Not only are commuter rail travel times not subject to many of the factors that can make auto times so unreliable (recurring congestion, crashes, incidents, weather) but also, commuter rail travel times can be expected to decrease overtime (as additional improvements are made to the infrastructure, and technological advances improve the performance of train sets), auto travel times are forecasted to do the opposite. Improvements to regional mobility and travel time reliability are two key criteria that are often used to assess the performance of transportation projects. Commuter rail service in this corridor can provide both, at a level the roadway system cannot hope to achieve.

When the Atchison, Topeka, and Santa Fe Railroad laid north-south tracks through the middle Rio Grande Valley in 1881, the resulting freight and passenger rail services transformed the economic fortunes of this region. Throughout New Mexico, railroads served as powerful economic engines, tying the Territory into a growing national economy and spurring the growth of communities such as Belen, Los Lunas, Albuquerque, and Bernalillo along the route. Many of us cross the track every day without realizing the tremendous potential the existing rail line still holds for economic development. That track represents an underutilized, valuable asset in the heart of our communities that can once again stimulate our local economy. While the era of heavy freight rail expansion is past, passenger rail is now enjoying a renaissance across the United States and New Mexico is perfectly situated to join regions such as Denver,

Dallas, and Salt Lake City in using passenger rail service to drive local economic development. Efficient transportation is vital to any healthy economy. Connecting employers with employees is a key component of economic development, and the efficient movement of goods and services is important to every business. Employers need to be confident that their employees can get to work on time, every day, and workers are more efficient when they avoid long, stressful commutes. As more and more employees now live outside the communities in which they work, efficient *regional* transportation systems are essential to future economic growth. Passenger rail can provide broad-reaching economic benefits through improved safety, lower transportation costs, and enhanced development opportunities at rail station sites. In other parts of the country, new passenger rail systems have increased regional employment, business activity, and productivity. In each community, new rail stations have become centers of activity, stimulating economic growth and raising property values in the area. In the Belen to Santa Fe corridor, proposed station sites are located in or near the traditional downtowns of the communities the line. The town of Bernalillo for example, is working on integrating the proposed station site into their Main-street redevelopment program. Belen is pursuing a similar course of action with their "Heart of Belen" Becker Street revitalization project. In a September 14th news story in the *Albuquerque Journal* Belen officials recognized that the commuter rail service will be an important component of their downtown revitalization plans. The commuter rail service provides another dimension of activity and transport that is very consistent with redevelopment objectives. Rail service is also seen by many as a quality of life issue and asset that can marketed to prospective businesses considering a move or start up to the region. In today's global environment, cities don't compete for economic development opportunities; regions do. Local governments must organize and collaborate for economic development and a safe, efficient transportation infrastructure/network is a fundamental building block in that effort.

There are many questions about how the introduction of Commuter Rail service in this corridor can address traffic congestion and air quality. Part of this answer will not be known with certainty until the rider-ship projections are complete (see Service Design discussion below). The other part of the answer is; mitigating and managing congestion and air quality issues in this region will require a concerted effort in many areas including improvements to the public transportation system, roadway capacity enhancements, investments in Intelligent Transportation Systems (ITS), and changes in growth and development patterns. A singular focus on individual projects, roadway or otherwise, without efforts in the other key areas, will not produce an effective response to the forecasted transportation and air quality challenges. This is the case for several reasons. The information provided on congestion earlier indicates how massive the problem is expected to be, just in the north south corridor. A single project in this corridor irregardless of the type (roadway, bus service, HOV lanes, rail) is not going to change the situation significantly. Despite the lane additions on I-25 in the MTP, for example, congestion is still expected to worsen overtime. Unlike lane additions to the Interstate or other high type facilities in the corridor, Commuter rail can provide an **alternative** to the traffic congestion. It can provide an **alternative** for travelers during construction, and it can provide an **alternative** for travelers when the weather is poor. Because this service

will be the first commuter rail service in this state, and will primarily serve markets adjacent to the rail line, it is not reasonable to expect dramatic changes in urban or regional congestion as a result of the implementation, no more than one should expect a dramatic change in the levels of congestion as a result of a roadway project (e.g. the BIG-I Reconstruction, Coors/I-40 Interchange Reconstruction). Over the longer term, if additional investments are made in public transportation, roadway capacity expansions, Intelligent Transportation Systems, (ITS), and, if the region can figure out ways to change traditional development patterns to some degree, there may be some detectable changes in the levels of traffic congestion during the peak periods. The commuter rail service is an important piece of an overall strategy to manage congestion. Otherwise there is simply too much demand for travel relative to resources and options available to supply capacity.

Air quality is a similar situation. Bernalillo County is designated as a maintenance area for Carbon Monoxide (CO). As part of the development of the MTP the MRCOG in cooperation with the City of Albuquerque Environmental health Department has to produce estimates of CO emissions related to mobile sources. This is accomplished by taking transportation summary statistics (speeds and Vehicle Miles of Travel) from the MRCOG travel demand model (by analysis year) and using them as inputs into Mobile6 (the EPA approved Air Quality Model) which produces estimates of CO for the subject analysis years. In order to insure that Bernalillo County does not exceed CO standards, the results of this analysis are compared to a CO "budget" which is developed independently and represents a ceiling that if exceeded is likely to produce CO levels in Bernalillo County that are beyond the limits set forth by the Clean Air Act Amendments of 1991. The results of this analysis from the MTP are illustrated in Table 3 below.

Table 3. CO Budgets and Projected Emissions from the 2025 MTP (Bernalillo County)

Mobile CO Emissions in Tons per Day	2005	2006	2010	2015	2025
Budget	367.28	312.65	312.65	312.65	312.65
Projected CO Emissions	344.71	308.31	272.01	249.02	246.79
Headroom	22.57	4.34	40.64	63.63	65.86
Daily Vehicle Miles of Travel	15,623,747	16,005,062	17,530,322	18,961,531	21,739,212

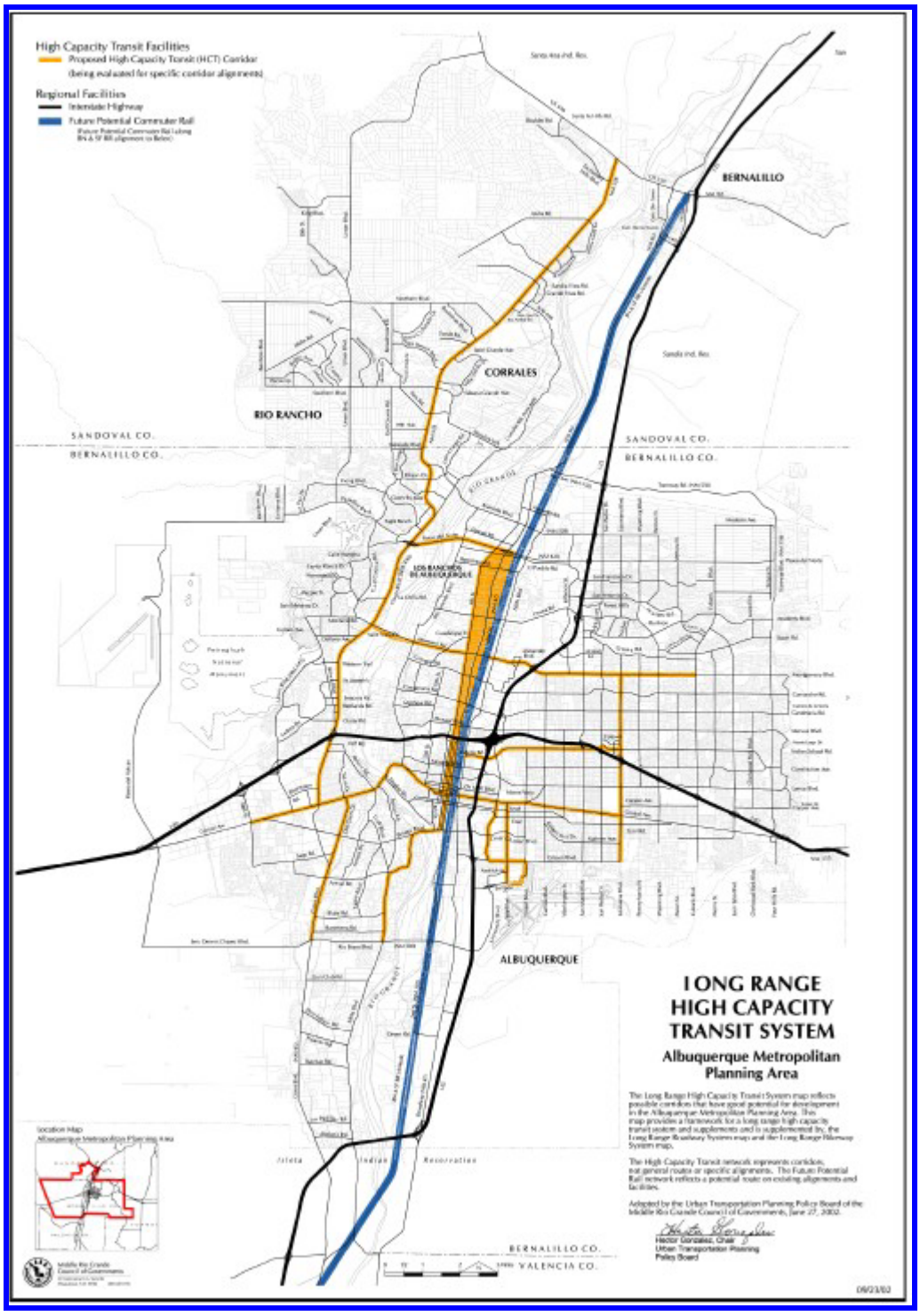
The table illustrates that over the course of the next 20 years CO emissions in Bernalillo County are expected to decline by almost 100 tons. Put another way, the analysis predicts that on a daily basis, 100 fewer tons of CO will be emitted into the atmosphere by mobile sources in the year 2025 than today despite all of the additional growth in population and Vehicle Miles of Travel. A great deal of this improvement in total emissions is due to an expected continuation of the trend of cleaner burning autos and improvements to fuels. This is one area where future year conditions are predicted to be better than they are today, and well below the budget ceiling. This analysis did not assume that the commuter rail service would be in place. It is anticipated that if it were included, the end result

would be a few fractions of a ton lower than those presented in the table. This conclusion is based on a great deal of sensitivity analysis the MRCOG has already done when evaluating build and no build alternatives for roadway projects both large and small. In almost every case there was no observable statistically significant change in the air quality results. The main reason for this (and it would be the same case for commuter rail) is that even the most significant projects do not materially affect system level average speeds or vehicle miles of travel enough to have an effect on air quality. The transportation system is so large (both in terms of total miles and vehicle miles of travel) that at any given time transportation projects are only affecting an extremely small percentage of the overall system, and this gets reflected in the extremely small changes in system level statistics like CO emissions.

Like many medium size urban areas the Albuquerque region is approaching potential violations to the federal standards for ozone. In fact data from many of the air monitors in this region indicate that the trend has been in the upward direction (towards violations) for many years. Many of these monitors have recorded concentrations that regularly exceed 90% of the standard. In the event that this trend continues, and it appears that it will, this region will likely be found to be in non-attainment for ozone. If this occurs it will be more difficult for agencies to utilize federal transportation dollars for general purpose lane additions to the roadway system, there will be additional pressure on transportation agencies to reduce dependency on auto travel, and additional regulatory requirements will need to be developed to reduce the production of ozone. It is not likely, for the reasons cited above, that commuter rail service will prevent this day from coming, but it can serve as a very important piece of an overall strategy aimed at improving the air quality in the region.

The commuter rail project is not the only high capacity transit initiative being considered for this region. The NMDOT in cooperation with the MRCOG and the City of Albuquerque conducted a very detailed transportation systems study of the middle Rio Grande region that was completed in 2001. This work, entitled The Middle Rio Grande Connections Study offered up a series of recommendations for transportation improvements in the region. Part of this work involved developing a systems recommendation for high capacity transit. High capacity transit in this case meant rail or other high capacity modes of public transportation. This system was refined and incorporated into what is now know as the MRCOG Long Range High Capacity Transit System Map which is shown in Figure 14 below. This map includes the commuter rail corridor (in blue) and a series of yellow corridors designated for some other form of high capacity transit.

Figure 14. MRCOG Long Range High Capacity Transit Map



This map was approved by the Metropolitan Transportation Board of the MRCOG in 2002. As a follow on to the Middle Rio Grande Connections Study, the City of Albuquerque initiated the Rapid Transit Project (RTP), which has since focused on the implementation of light rail or bus rapid transit in the Central Ave./Lomas Blvd. corridor

between Coors Blvd. and Louisiana. The City of Albuquerque has advanced this project through the Federal Transit Administration (FTA) New Starts process and has completed an Alternatives Analysis and is in the process of completing an Environmental Impact Statement which will identify a precise alignment and system (light rail or bus rapid transit). Like the commuter rail project, this project could provide a very critical high capacity cross river transit link in the east/west direction. The two initiatives together, with a meet point at the Alvarado Transportation Center, could provide the framework for a very effective public transportation system in the middle Rio Grande region.

Finally, there are a number of other angles from which to consider the commuter rail project. There is a population in this corridor that does not drive, and has very poor access to the regions services and amenities. This population is expected to get larger as the population ages, and the number of elderly people who cannot drive grows. The U.S. Census Bureau projects that the number of Americans age 65 or older will swell from 35 million today to more than 62 million by 2025 - nearly an 80 percent increase. As people grow older, they often become less willing or able to drive, making it necessary to depend on alternative methods of transportation. The cost of auto travel has also climbed significantly over the past ten years, partially due to the price of gas, but mainly due to the other costs associated with auto ownership like the cost of a vehicle, insurance and repairs. According to the Bureau of Labor Statistics Consumer Expenditure Reports the proportion of household income devoted to transportation has risen from 10% in 1935 to 14% in 1960 to about 20% today. Housing is the only category that exceeds transportation as a percentage of household expenses. And nationally, on average, transportation costs are three times what the average household spends on healthcare. Transportation costs as a percentage of household income are expected to continue to grow in the years to come, making it more difficult for lower income households to afford transportation expenditures.

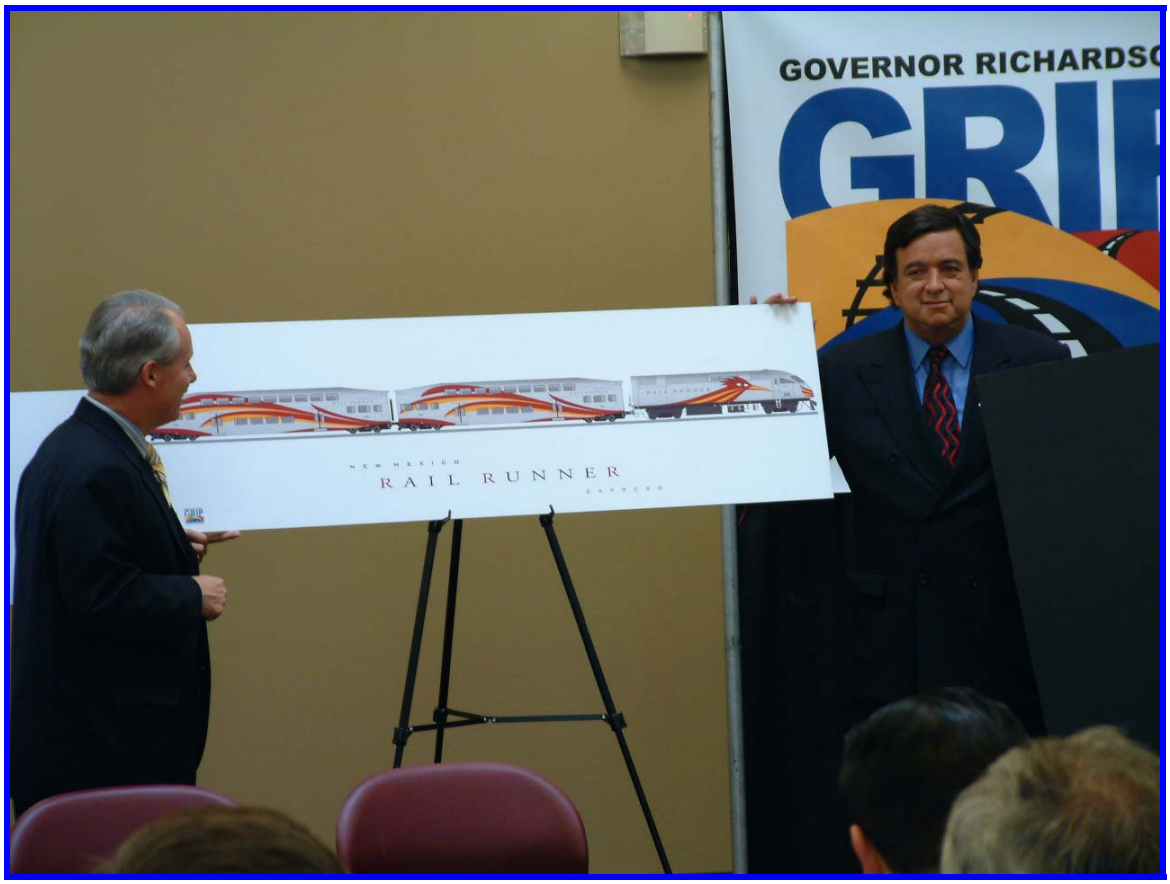
Commuter Rail Project Status Phase I

Since August of 2003 the MRCOG and the NMDOT have been working together to accomplish a number of tasks. Most of the work focus has been on Phase I given the nearer term schedule. There are six primary work elements in Phase I. They include the development of a branding and naming scheme, station development, rolling stock acquisition, negotiations with the BNSF, service design and public involvement. The sections below describe the work that has been accomplished in each of these areas, and work plans for tasks not completed to date. It is important to note that all of these work elements are interrelated, meaning that decisions made for one of these elements can affect all of the others. For example, the times available for the commuter service to run on the track (a BNSF negotiation item) can affect the service design (schedule) which can have an affect on the number of trains required and the size of the train sets which in turn can influence the platform design. Because of the schedule, the near term focus has been on long lead capital items, like station development, the acquisition of rolling stock and the negotiations with BNSF. These efforts have helped define the commuter rail service to some degree, but have also caused a number of iterations in the thinking, because of the issues mentioned above.

Branding and Naming

On March 21, 2005 Governor Bill Richardson formally announced the name and branding schemes for the New Mexico's commuter rail service at a press conference in Albuquerque New Mexico (see Figure 15 below).

Figure 15. Governor Richardson Unveiling The New Mexico RailRunner Express with Albuquerque Mayor Martin Chavez



The name, "New Mexico RailRunner Express", colors (red, yellow and silver) and logo (the roadrunner), were chosen after months of research, focus group meetings, and design evaluations. To assist with this work the NMDOT and the MRCOG utilized the firm of Vaughn Wedeen Creative, an Albuquerque based design and marketing firm. The RailRunner name, colors and logo are integral to many aspects of this project including the platform design, train paint schemes and car interiors. The name, colors and logo drawn on features of New Mexico's history and heritage (see Figure 16 below) and also provide a very noticeable look to the commuter rail service.

Figure 16: Origins of RailRunner Name, Colors & Logo

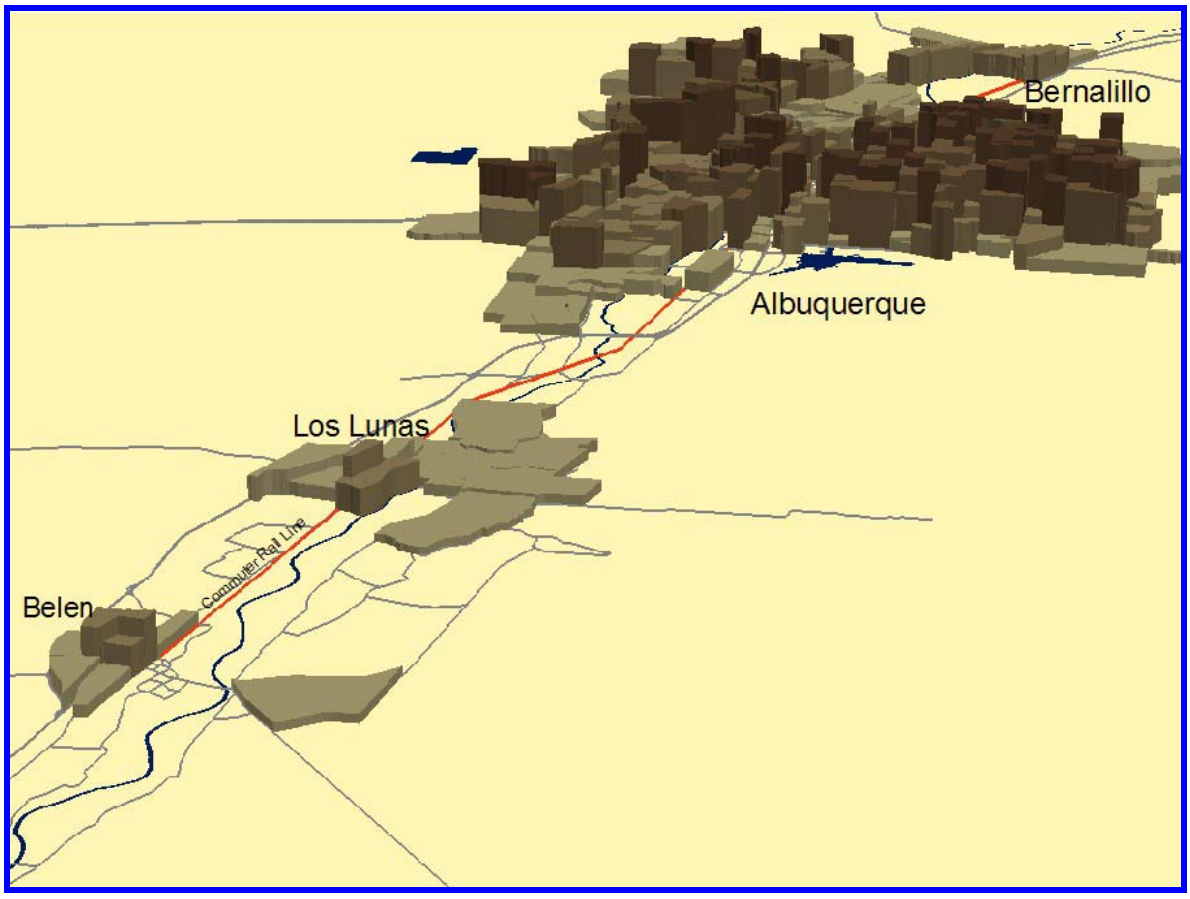
Station Development

Commuter rail stations range from something as simple as a single platform to elaborate multi platform joint use full service inter-modal facilities like Penn Station in Manhattan. In the Phase I corridor most of the stations will be rather simple. At the origin end most will consist of a platform and a parking lot. At the destination end (downtown Albuquerque) the platform already exists as do several buildings that house ABQride (formerly Suntran), Amtrak and Greyhound.

The process of identifying station locations was guided by a number of parameters. These include more general commuter rail operational characteristics, the existing track alignment, local community preferences, BNSF operational considerations, land availability, existing plans, and the location of population and employment centers. In order for a commuter rail service to be time competitive with the auto it is not desirable to have stations located closer than five miles apart. In order to maximize the potential of the service, station locations should be accessible to population centers on the origin end and employment centers on the destination end. It is also desirable if the station locations on the origin end have good access to the arterial system and have adequate space to accommodate a park and ride market, as well as walk, bike and drop off markets. On the destination end, access by bus, walk and bike to jobs and services is a key consideration.

Because the starting point for identifying station locations was the existing line, the first task was to identify general station locations relative to spacing requirements and existing communities. Intuitively, this exercise was already simplified by the project termini. Stations would need to be located somewhere in Belen and Bernalillo, and downtown Albuquerque. From these known points other logical **candidate** locations were selected based on station spacing and the existence of established communities. Hence Los Lunas, Isleta Pueblo, South Albuquerque, North Albuquerque and Sandia Pueblo were added to the list. Some of this work was guided by a considerable amount of source data (e.g. 2000 Census, population and employment forecasts, aerial photography etc.). See Figure 17 below.

Figure 17. Year 2000 Census Population Data in 3D



Much of this initial work was completed by MRCOG staff. Once these initial locations were identified, it was necessary to look at specific sites along the line and apply another level of detail to the analysis. The MRCOG retained the services of HDR Inc. to assist with this step of the station development process.

One of the initial tasks was to collect basic information on all candidate sites. In some cases, for reasons described below, there was only a single site in a community, in others there were multiple candidate sites identified. The following 4 pages is an excerpt of the site information collected as part of this task for the U.S. 550 site in Bernalillo.

Sample Station Site Profile U.S. 550 Site in Bernalillo

Community: Bernalillo (550)

Site Location: South of Bernalillo High School; West of BNSF Right of Way; East of McDonalds; North of US 550

NMDOT/MRCOG COMMUTER RAIL PROJECT STATION SITE ALTERNATIVE EVALUATION SUMMARY	
Criteria	**Comments**
Size of site	Sufficient. 7.8 Acres available.
Required rail improvements	Stub End track needed for layover.
Ease of implementation	Existing BNSF track is in a 1-degree curve with 1" of superelevation extending 1100 feet north and 500 feet south of the bridge . Will require curved platform if platform is on the mainline and special turnout for stub track. Track survey should be performed to determine the limits of the curve
Proximity of utility services	Developed area. All utilities available.
Possible impacts on major utilities	Bernalillo Acequia may need to be put in a box culvert.
Vehicular access	Good from US 550. Poor sight distance from small driveway immediately West of the bridge. May need signalization if chosen for main access.. Alternative access could be from the existing intersection at 550 & Hill St (McDonalds). Will need to bridge Bernalillo Acequia for access road.
Pedestrian/bicycle access	Poor. No sidewalks or bike lanes on 550.
Transit access	Potentially good. No bus routes serve this area but it sits on a main highway.
Proximity and ease of access to activity centers	Hotels and restaurants in close proximity. Other activity centers are close by via U550.
Consistency with existing land use and local plans	Current land sue seems to be commercial retail. Bernalillo High School abuts the proposed site to the north.
Economic development potential	Potentially very good. Site is large and the surrounding area is developing rapidly.
Ownership (Public, Private)	Private.
Number of residents	According to 2000 census data, there are 768 residents within ½ mile of the station site.

NMDOT/MRCOG COMMUTER RAIL PROJECT STATION SITE ALTERNATIVE EVALUATION SUMMARY	
Criteria	**Comments**
Number of households	According to 2000 census data, there are 303 households within ½ mile of the station site.
Proximity and ease of access to zero-car households	According to 2000 census data, there are 32 zero-car households (10.5%) within ½ mile of the station site.
Proximity to low-income households	According to 2000 census data, 135 or 16.9% of the households within ½ mile of the station site have incomes below the poverty level.
Proximity to jobs	According to 2000 census data, there are 712 jobs within ½ mile of the station site.
Income data	According to 2000 census data, the mean household annual income within ½ mile of the station sites is $38,671.
Age data	According to 2000 census data, within ½ mile of the station site 23.8% of the population are between 0 and 14 years old; 11.8% are between 15 and 24 years old; 28.4% are between 25 and 44 years old; 22.1% are between 45 and 64 years old; and 13.8% are 65 years and older.
Ethnicity data	According to 2000 census data, within ½ mile of the station site 65.8% of the population is Hispanic; 27.0% is White, Non-Hispanic; 4.2% is American Indian, Non-Hispanic; 3.0% is reported as Other, Non-Hispanic; and 0.1% is Black, Non-Hispanic.
Proximity to known hazardous material sites	Results of the preliminary initial site assessment indicate that no significant hazardous materials concerns exist. The use of the location for a rail stop would be appropriate, pending completion of a property transfer site assessment.
Possible impacts on potential historic, archaeological, and cultural resources	A pedestrian survey has been completed for the location. There is one eligible property within the project area; however, it is currently in use and is maintained regularly. There is one eligible property within the 100-foot vibratory Area of Potential Effect (APE); however, it is currently in use and is maintained regularly. The proposed action is not anticipated to negatively impact the properties; hence there is no adverse effect.
Impacts on floodplains, riparian areas, critical habitat	Site is not within a floodplain. Very disturbed site, within an urban setting. No potential to impact any federally or state-listed species, as no suitable habitat occurs. Project site does not contain any critical habitat. No riparian area on the site.

Photo 1

Photo 2

Aerial of U.S. 550 Station Site

The information included in these candidate station site profiles provided a baseline to assess the adequacy of the site from a general market, environmental, rail operations, land acquisition, land adequacy and accessibility perspective.

In addition, in the Fall of 2003, the MRCOG formed a Commuter Rail Task Force (CRTF), primarily from MRCOG board members. This group is made up of locally elected officials from communities along the Phase I line. Station site selections have been discussed with this group and separately with elected officials from each community. This information was also considered in the site selection process.

This level of effort generated seven final site locations. They are as follows.

1. Belen: Northeast corner of Reinken Ave. and the railroad tracks.
2. Los Lunas: Courthouse Dr. and the railroad tracks
3. Rio Bravo/Airport: Northeast quadrant of Rio Bravo and the railroad tracks.
4. Downtown Albuquerque: Alvarado Transportation Center
5. North Albuquerque: Northeast Quadrant El Pueblo Road and railroad tracks.
6. Sandia Pueblo: Vicinity of Roy Ave. and the railroad tracks.
7. Bernalillo: Downtown Bernalillo east of Bernalillo Town Hall.
8. Sandoval County: Southwest Quadrant U.S. 550 and the railroad tracks.

Also discussions with Isleta Pueblo have not at this time produced any decisions related to a site location. In the event Isleta Pueblo decides on a location, the total number of stations for Phase I would be nine.

In all cases the sites selected are not expected to be a problem from an environmental, railroad operations, or accessibility standpoint. But, the decision on a final site location was based on different factors in different communities. For example, elected officials from the City of Belen expressed a desire to locate the station as close to downtown Belen as possible. Access and land adequacy issues in the vicinity of Belen produced two candidate sites, once just adjacent to downtown Belen, and one several miles north of the downtown. The site next to downtown was selected because it was favored by the City Council and Mayor of Belen, and also was accessible to a larger population pool than the other location.

In Los Lunas the selection of a station site was relatively simple. The Village of Los Lunas had pursued Federal funds to locate and construct an Inter-modal center for their on demand Transit services program. The site that was identified for this purpose was centrally located in Los Lunas on a piece of land adjacent to the railroad tracks. Because of its purpose, location and size it was considered to be the obvious site for the Los Lunas station.

The station location in south Albuquerque was chosen because it is the only location where enough vacant land exists for a considerable distance along the line, and other candidate sites (Woodward Road and the railroad tracks) would require the disruption and or displacement of some fairly large BNSF operations (UPS offloading and the Ford auto loader facility).

The Alvarado Transportation Center is centrally located in downtown Albuquerque. It is the hub of the City of Albuquerque Public Transportation operations and is also next to the Amtrak station and the Greyhound Bus station. The decision to locate a stop here was based on these connecting services, and the accessibility of this location to jobs and services that no other location in downtown Albuquerque can match.

There were two potential sites under consideration for North Albuquerque. One at Alameda Blvd. and the railroad tracks and the site that was ultimately selected at El Pueblo. The Alameda site was rejected after an open house in north Albuquerque, primarily due to neighborhood concerns and difficulties providing reasonable access to the site given peak hour traffic volumes on Alameda Blvd.

The site in the Roy Ave./railroad tracks vicinity was provided by the Sandia Pueblo as a potential site for a commuter rail stop. Sandia Pueblo supported the initiation of an Environmental Assessment (which is in progress) to determine which site is most appropriate. After the EA is complete the Pueblo will make a final decision on the implementation of a station.

The site in downtown Bernalillo was provided to the MRCOG as the site desired by the Town of Bernalillo for a commuter rail stop. This site and the proposed use are consistent with the goals of the Town of Bernalillo and initiatives they have been pursuing for some time including a main-street program and downtown revitalization. Discussions with elected officials and staff from the town of Bernalillo also resulted in the investigation of an additional site. The site selected for downtown is not well suited for a park and ride, nor is it well suited to capture travelers in the U.S. 550 corridor (Northern Rio Rancho and Placitas). Hence the four quadrants adjacent to U.S. 550 and the railroad tracks were investigated. The southeast quadrant is already utilized for a park and ride and it is frequently near capacity. Expanding this site was considered an option but flood plain issues to the south of the existing parking lot were difficult to manage and there is a considerable grade difference between the parking lot and the tracks that would have required extensive work to address ADA access. The lot directly cattycorner to this site (Northwest quadrant) was also considered, but after an extensive revue of access options from U.S. 550 the site at the Southwest quadrant was selected. Both of the sites were equally as viable for a commuter rail station but access to the site on the southwest quadrant is more direct and feasible.

The selection of a site for each stop is one step in the development process. Once a site is selected, there are several additional steps that need be taken. Table 4, illustrates the status of some of the near term tasks for each of the station locations.

Table 4. Status of Station Development Tasks

Station	**Environmental Review***	**Survey**	**Site Plan**	**Property Acquisition**
Belen	Complete	Complete	Complete	Public
Los Lunas	Complete	Complete	Complete	Complete
Isleta Pueblo	TBD	TBD	TBD	N/A
Rio Bravo	Complete	Complete	Complete	TBD
Alvarado	Complete	Complete	Complete	N/A
El Pueblo	Complete	Complete	Complete	Public
Sandia Pueblo	In Process	TBD	TBD	N/A
Bernalillo	Complete	Complete	Complete	Complete
U.S. 550	Complete	Complete	Complete	In Process

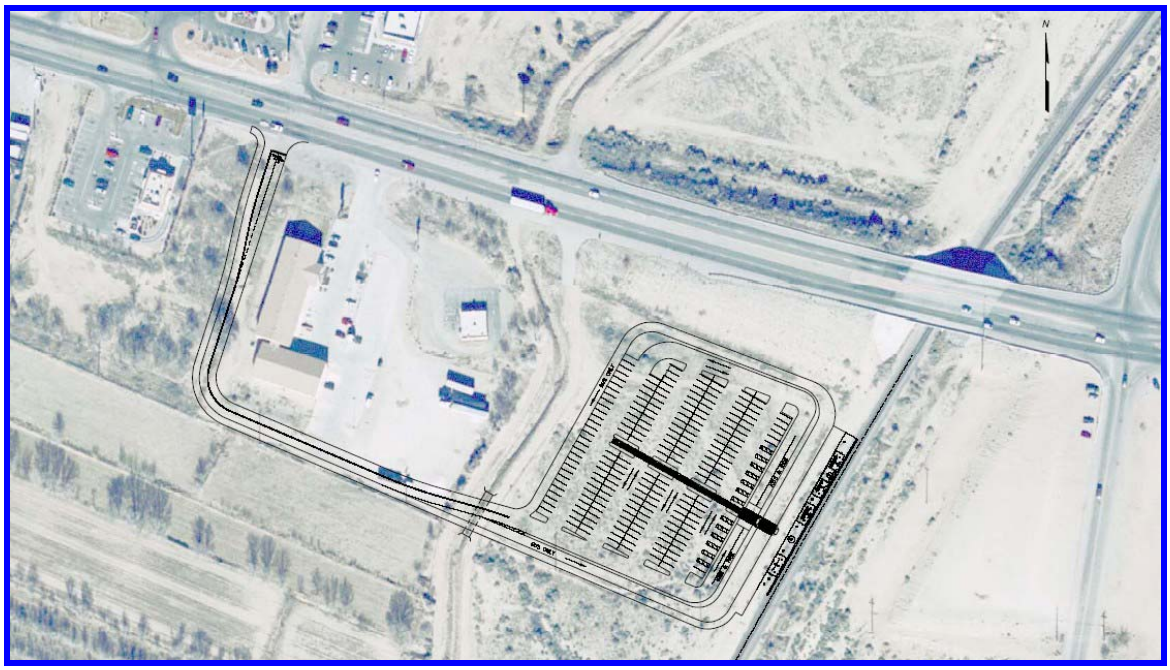
*The level of effort varies by site. Includes hazardous materials assessment, historic, archeological and cultural resources, and plant / animal life

After sites were selected, draft site plans were prepared for each station. Since many of the station locations will serve as park and rides, most of the site plans include the station platform and a parking lot, like the site plan for the U.S. 550 site depicted in Figure 18. below.

In addition to these activities MRCOG and HDR have developed a prototypical station platform and have initiated efforts to develop architectural themes to these platforms that represent the local communities identity, but also create a unifying theme and

communications protocol (signs, information etc.). Between September of 2004 and the end of February 2005, the MRCOG, NMDOT and HDR worked with each of the local

Figure 18. US. 550 (Sandoval County) Site Plan



communities to accomplish a number of tasks. They included: finalizing a site plan, acquiring the necessary property, identifying station access improvements, and finalizing the look of the platform and adjacent site work. This effort involved public meetings to gather information and feedback on initial concepts, like the draft mock up of a station platform at the Belen site in the figure below.

Figure 19. Draft Mock Up of the Belen Station Platform

Since this time, additional work has occurred on the design and features of each station. The basic platform has evolved from the mock up shown in Figure 19 to designs that better reflect the interests of the local communities and southwest architecture. Figure 20 illustrates a sample of the revised look.

Figure 20. New Station Platform Design

Work on the Downtown Albuquerque (Alvarado) Station has focused on dressing up the existing platforms and providing better access to the Alvarado Intermodal Center and the soon to be completed Alvarado II, which will house a terminal for inter-city bus service. One of the access concepts is depicted in Figure 21 below.

Figure 21. Alvarado Intermodal Center Access to Train Platform

Another activity associated with the station design is the development of signage, a kiosk and station monument. These features have been added to the final design to produce a prototypical platform that will look similar to the one shown in Figure 22.

Figure 22. Final Platform Design

Once the final design and construction drawings are produced, appropriate permitting will be pursued through the local governments and others as required, and then bid packets will be prepared for letting, which will result in the construction of the stations. Bids for station construction will be released later this spring and construction for most of the station locations is expected to start in June 2005 and take between 3 and 5 months to complete. This estimate is based on comparable station construction time frames on other commuter rail lines.

Rolling Stock Acquisition

Acquiring rolling stock, (engines and passenger cars), for the commuter rail project has been a particularly challenging element of the overall project implementation. Based on information acquired from other commuter rail agencies, the typical time frame for acquiring new vehicles was on the order of 2 to 3 years from the date of order. Used equipment is also in very short supply, with the exception of some very old equipment owned by Metra, Chicago's commuter rail operator. The MRCOG hired LTK Engineering Services, a nationally recognized firm in the arena of commuter rail equipment acquisition to help seek out rolling stock solutions for this operation.

One of LTK's first tasks was to advise the MRCOG on the availability of used equipment, and potential options for acquiring new equipment. LTK's review of the used passenger car market yielded very few results. The Virginia Rail Express was exploring the possibility of selling their fleet of year 2000 Kawasaki bi-level cars, but a decision was not likely in the next year. Metro in New York had some single level cars that they were thinking about selling, but follow up conversations with Metro revealed that this was not the case. Metra in Chicago was dispensing of some old 1960s vintage gallery cars. These cars are not ADA accessible, have asbestos in the walls and many of them were painted with lead based paint. In the late spring of 2004 LTK advised the MRCOG

and the NMDOT that the Southern California Regional Rail Authority (SCRRA) was in the process of selecting a contractor for the design and construction of new passenger rail cars. As part of this process the MRCOG contacted the SCRRA and requested an option on the final contract for new cars. Securing an option on another agencies car order carries no immediate financial obligation it simply provides a place holder if the agency holding the option chooses to exercise it. MRCOG was granted an option by the SCRRA but the earliest new cars would be available under this option was late 2007 early 2008. The SCRRA process has since been protested and due to events described below MRCOG has withdrawn the option on the SCRRA car procurement.

On the locomotive side LTK evaluated new engines, but a two year delivery time frame is standard and each locomotive would cost between $3.0 and $3.5 million. Rebuilt engines can be acquired but the time frame on these is typically a year to eighteen months, and the typical cost is between $1.8 and $2.5 million. LTK also located several AMTRAK used P-40 locomotives that were not being utilized by Amtrak due to service cut backs and because Amtrak had recently acquired a series of new P-42 engines. The P-40s were built in 1993 and have only been out of service for a relatively short time period.

In order to move on the passenger car issue the MRCOG and the NMDOT decided to release an RFP with a technical specification for service proven bi-level cars, new or used. LTK wrote the majority of the technical specification and the RFP was released in July of 2004, and closed in August of 2004. A total of four responses to this RFP were received. All but one proposed new cars, the remaining offered Chicago Metra Gallery cars “as is”. A selection committee was assembled as part of this RFP process and proposing firms were rated based on the criteria in the RFP. Bombardier Transportation was selected to provide the cars for the service. A contract with Bombardier was negotiated and executed to build up to 10 new bi-level coaches with a proposed delivery of all cars within one year of notice to proceed. The bi-level cars selected contain about 140 seats per car and can carry up to 200 persons per car, seated and standing. The cars actually have three levels; a low level boarding level with seats, a restroom and accommodations for bikes and wheelchairs, a mid level at each end of the car and an upper level. Of the 10 cars ordered, 6 are referred to as “cab cars”. These cars have an engineers cab at one end of the coach, which allows the engineer to run the train from this end of the train. A cab car will always be situated at the end of the train, so that the trains can be run in a “push-pull” mode, which means that in one direction the engine will be at the front of the train, but when the train runs in the opposite direction, the cab car will be at the front end of the train. This allows trains to reverse direction on the line without having to turn around at the end points. A picture of a the outside of Bombardier bi-level commuter rail car, built for the Seattle Sounder commuter rail service is shown in Figure 23 below.

Figure 23. Bombardier Bi-level Commuter Rail Car

The 10 cars are in various stages of development at Bombardier's manufacturing facility in Thunder Bay, Canada. Figure 24 shows several of the commuter rail cars under production.

Figure 24. A New Mexico Commuter Rail Car In Production (Thunder Bay, Canada)

The car that is furthest along in the development process is shown in Figure 25.

Figure 25. Cab Car 1101 With the New Mexico RailRunner Express Paint Scheme

The interior of this car is not yet completed, but the design and colors have been selected. Most of the seats will be in a “knee to knee” configuration with a small table separating facing passengers. In most cases standard AC power outlets will be available next to the tables so that passenger’s will be able to power their own electronic devices, such as laptops. The MRCOG and the NMDOT are also evaluating the potential for providing wireless internet service in the coaches. Figure 26 illustrates a rendering of the upper level car interior that is based on the seat configuration and colors noted above.

Figure 26. Mock Up of Car Interior (Upper level)

The 10 cars are scheduled for delivery in Albuquerque in July, August and September of this year.

In late July 2004 Amtrak issued a request for bids on their P-40 locomotives (see Figure 27 below). LTK inspected each of the locomotives and prepared an estimate of the cost associated with making each of the locomotives service ready.

Figure 27. Amtrak P-40 Locomotive

In addition they provided the MRCOG and NMDOT with an estimated present value for each locomotive, to serve as a basis for a potential bid. MRCOG and the NMDOT submitted a bid on 6 of these Amtrak locomotives. The closing date for bids is September 15, 2005. Amtrak did not accept the bid provided by the MRCOG and NMDOT. After several subsequent failed attempts to reach a reasonable price for the purchase of these locomotives with Amtrak, the MRCOG and the NMDOT decided to look at other options. The most promising (given the time constraints) was to utilize a purchase option from another transit agency to acquire locomotives. The San Joaquin Regional Rail Commission granted the MRCOG and the NMDOT an option to purchase up to five locomotives from Motive Power Inc. in Boise, Idaho. A contract with Motive Power was negotiated to acquire four Diesel-Electric MP36PH-3C locomotives with an option for a fifth. These engines are EPA Tier 1 compliant and contain the latest engine and cab technologies. Figure 28 includes a picture of the MP36PH-3C locomotive built for the Caltrains commuter rail service in Northern California.

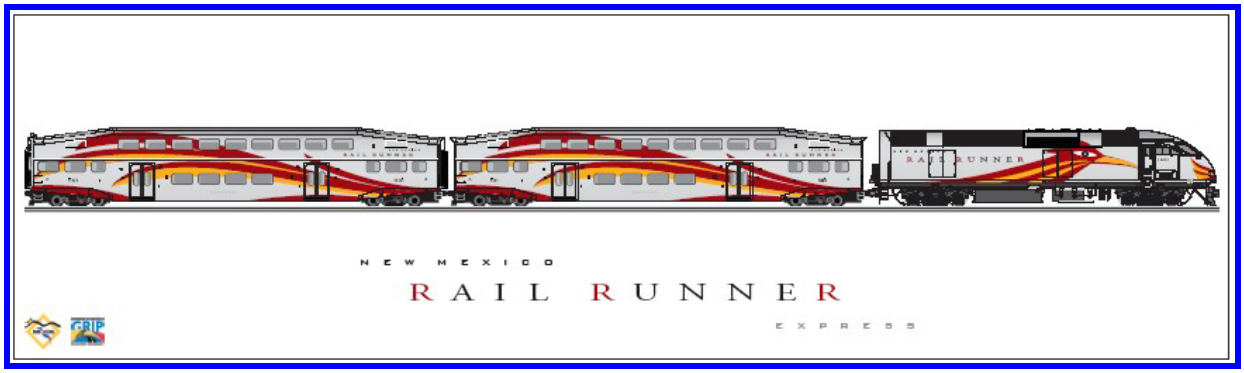
Figure 28. Motive Power MP36PH-3C Locomotive

These locomotives are being built in Boise Idaho at Motive Power's production facility depicted in Figure 29 below.

Figure 29. Motive Power Production Facility, Boise, Idaho

These locomotives are scheduled for delivery to Albuquerque in September and October of 2005. Assembly of the first locomotive will begin in April so no pictures are available at this time. Figure 30 illustrates what a train set will look like with the Motive Power Locomotives, Bombardier Bi-Level cars and the New Mexico RailRunner Express paint scheme.

Figure 30. Final Train Set



Negotiations with the BNSF

The BNSF Railroad owns the rail line running north out of Belen all the way to the New Mexico state line at Raton and beyond. This line used to be a critical link in the freight and passenger network of the now defunct Atchison Topeka and Santa Fe railroad (AT&SF). Because the BNSF owns the line and the rights of way proposed for use by the commuter rail service for Phase I, the MRCOG and the NMDOT have been in the process of discussing alternative arrangements for the use of the line. Late in the Fall of 2003 MRCOG solicited and selected private sector expertise to assist in the process of negotiating with the BNSF. The consultant selected for this particular area is Lonnie Blaydes Consulting. This negotiation process started in earnest in January of 2004. The discussions started with a clear message from the BNSF that while this line was underutilized they were going to be very sensitive to aspects of the commuter rail service that may impact their ability to move fright on the line. As an initial step in the negotiations the BNSF asked for a rough sketch of potential service parameters (times the line would be utilized by the commuter rail service) so that they could perform an initial "engineering assessment" of the potential impacts created by the service parameters and advise the MRCOG and the NMDOT us accordingly. The MRCOG provided BNSF with this initial set of information in February of 2003. By March of 2003, the BNSF provided the MRCOG and NMDOT with feedback on the draft parameters. This included the need to extend several existing sidings on the line, the addition of a couple of new sidings, the signalization of the portion of the track between Belen and Isleta Pueblo and improvements to several track and road crossings (necessitated primarily by the new track based signal system). Most of these improvements were needed to increase the carrying capacity of the line to minimize or remove potential time conflicts with BNSF freight and Amtrak passenger movements.

Since March of 2003 additional discussions with the BNSF have taken place, in part to test the implications of alternative service options against the capital improvements required to accommodate the service options. This is necessarily an iterative process, as the BNSF, MRCOG, the NMDOT, and consultants working on the project explore service options and the resulting improvements at greater levels of detail. This includes track and signal improvements but also the accommodation of station platforms, dispatch, safety and current and future BNSF operations in the corridor. In addition, the BNSF has been asked to respond to several different use arrangements including the purchase of the line, a lease of time on the line, and the purchase of an easement.

The MRCOG, BNSF and HDR have also concluded a very detailed assessment of all the roadway crossings of the line to aid in the identification of safety improvements. A large part of this work effort involved updating information on each crossing that was held by either BNSF or the NMDOT, including the crossing type (public/private), traffic volumes, site characteristics (visibility and geometrics), adjacent or accessible land uses, and crossing function (arterial, service road, agriculture).

Ultimately as many as three separate agreements could emerge from this process. A capital agreement that covers the nature and timing of capital work within the BNSF rights of way (track, signal, crossing and platform improvements), an operating agreement which covers arrangements for the lease, lease purchase, or acquired easement

for a period of time into the future, and an engineering agreement which describes arrangements for the approval and construction of improvements.

Substantial progress has been made on many of the technical issues. In fact there are very few cases where the need for improvements is currently in dispute. On September 28th 2004 Governor Bill Richardson signed A Memorandum of Understanding with the BNSF which outlines the intent of both parties to complete a transaction for the commuter rail service. However the nature of these negotiations and requests for alternative use arrangements are matters that must be considered from a very deliberate business perspective by the BNSF and the MRCOG and NMDOT. This process takes time. It is difficult to calculate precisely when these negotiations may conclude, but all the parties are confident that final agreements can negotiated sometime this Spring.

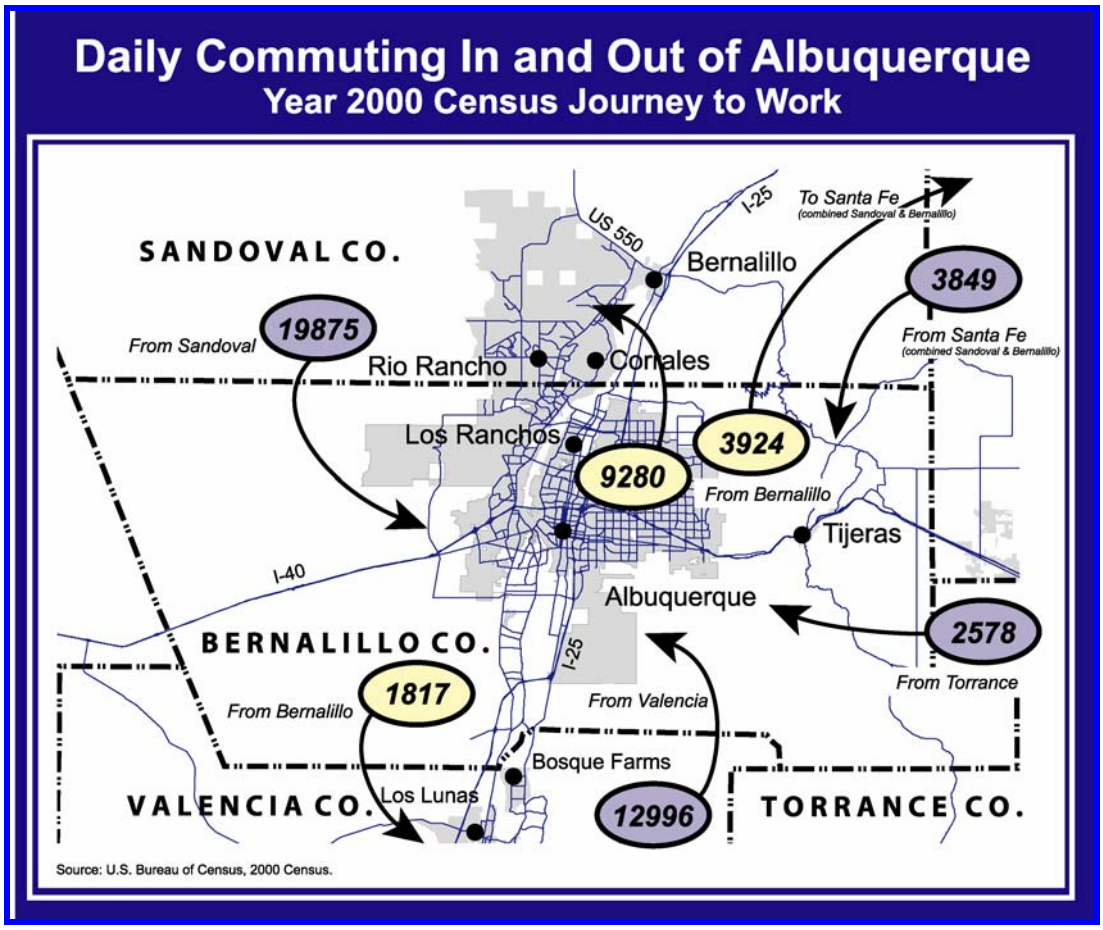
Service Design

Developing a final service design for Phase I has involved the consideration of a number of sub elements that include market analysis and ultimately rider-ship forecasts, train schedules and frequency of service, connecting services, fare structures and ultimately operating costs and service revenues. These items are all interdependent to some degree and interdependent with the major elements discussed previously. For example, train schedules and frequency, are one determinant of rider-ship and a large determinant of operating costs. Connecting services are an important dimension of the market analysis which provides the basis for rider-ship forecasts. The service design in this corridor can potentially impact freight movements which can affect the list of necessary track and signal improvements.

To address these interdependencies, the MRCOG and NMDOT have pursued the development of a service design for Phase I in an iterative matter in coordination with the other elements of the project, and within the context of the budget for Phase I. Most of the service design related work has been accomplished utilizing MRCOG staff with some assistance from Planning Technologies LLC, a firm retained by the MRCOG to assist with model development and enhancements and planning technical support.

For the market analysis, early work focused on summarizing year 2000 Census data, reviewing relevant previous studies, developing origin and destination data from the Census Transportation Planning Package (CTPP) and results from the MRCOG travel demand model. For example some of the first data available from the CTPP were county to county work trip tables.

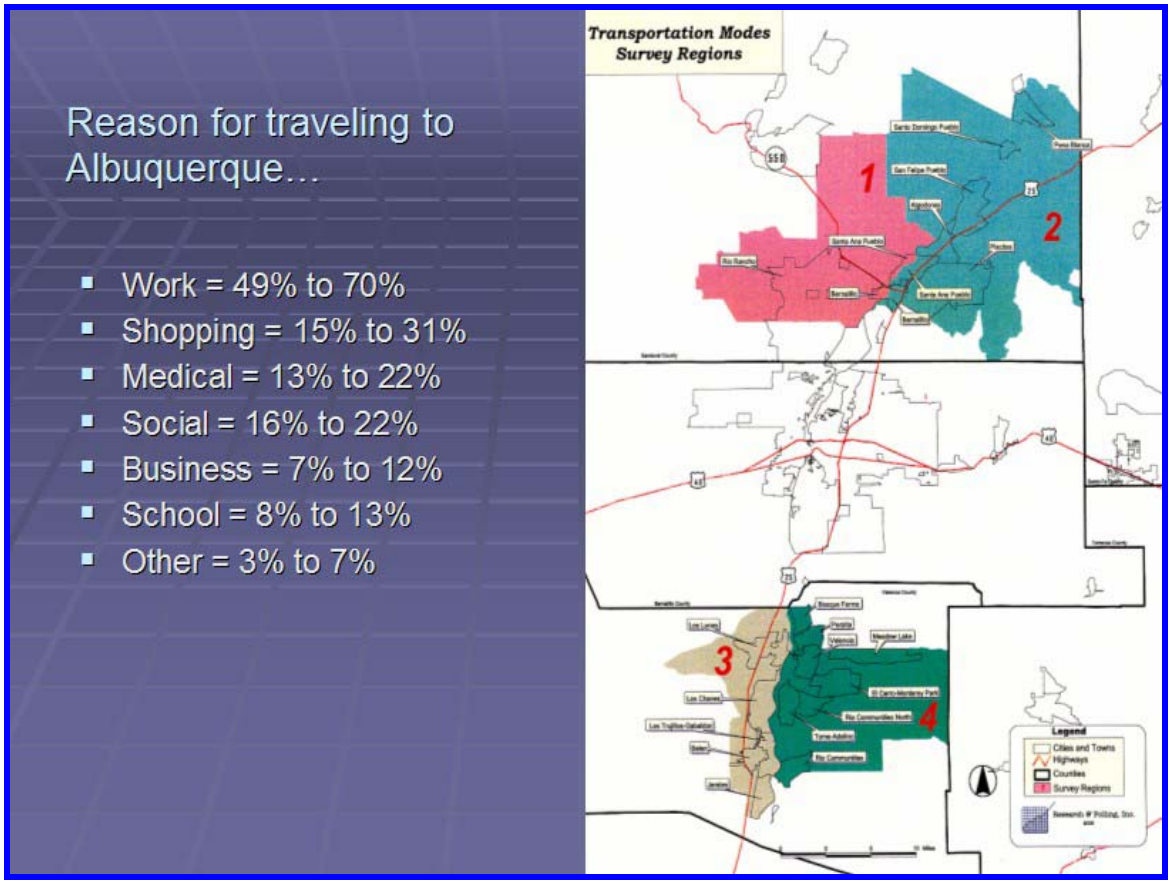
Figure 31. Summary of Year 2000 CTPP County to County Commuter Flows



The county to county data indicate that in the year 2000 an estimated 12,996 people living in Valencia County worked in Bernalillo County. Only 1,817 persons lived in Bernalillo County and worked in Valencia County. Figure 31 also shows sizable commute exchanges between Sandoval County and Bernalillo County in both directions. The data for work exchanges between Santa Fe County and the counties of Bernalillo and Sandoval shows that almost 4,000 persons that are living in Bernalillo or Sandoval County work in Santa Fe, and about the same number live in Santa Fe County and work in the counties of Bernalillo or Sandoval. Further analysis has since indicated that about 3,000 of these persons are actually coming from Town of Edgewood. This information does not show the total number of exchanges between counties because it is based on the Census long form, so it is only an indication of regular commute flows. Data collected from MRCOG traffic counts reflect much higher volumes of traffic between these counties, but the traffic counts capture all trips (work, shopping, education, business, tourism etc.). This information did provide the MRCOG and the NMDOT with a basis for understanding the relative size of the work market related exchanges between counties. Another part of this early work focused on an extensive survey of travel behavior in the commuter rail corridor that was generated by the City of Albuquerque as part of the Rapid Transit Project. This survey, conducted by Research and Polling in March of 2003, included 69 questions and generated some very specific and useful information about travel markets between northern Sandoval County and Valencia County and the City of

Albuquerque. The survey was completed for 1000 households and the results have a stated margin of error of 3.9% at the 95% confidence level. Figure 32 illustrates the results of one particular question from the survey.

Figure 32. Trip Purpose to Albuquerque



The map on the right of the figure indicates the four areas the survey results were summarized from. Area 1 includes the northern portion of Rio Rancho and the portion of Santa Ana Pueblo on the west side of the Rio Grande. Area 2 includes the communities of Bernalillo, Placitas, Algodones and Pena Blanca and the Pueblos of Santa Ana, San Felipe and Santa Domingo. Area 3 includes the developed portion of Valencia County on the west side of the Rio Grande, and area 4 includes the developed portion of Valencia County on the west side of the Rio Grande. Figure 32 illustrates survey respondent's reasons for traveling to Albuquerque. The range in percentage is due to the vary rates from the 4 areas. It is clear that the work trip is the largest market based on this survey, which is a positive result for commuter rail service, but other notable trip purposes include shopping, medical and social.

Figure 33. Trip Frequency to Albuquerque

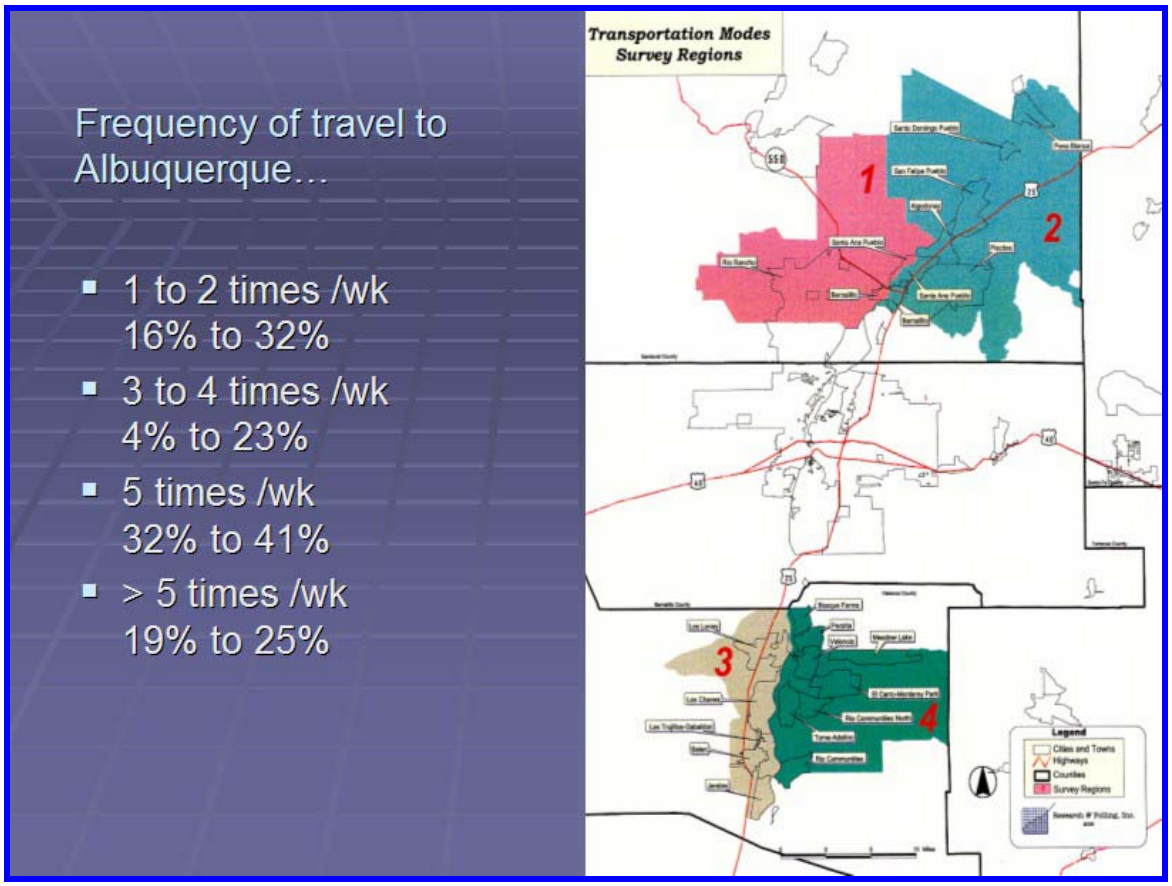


Figure 33 illustrates the results to another question from the same survey. The results indicate that many of the respondents travel to Albuquerque **5 or more** times a week (51%-66%). This is a positive indication of a stable customer base for commuter rail service.

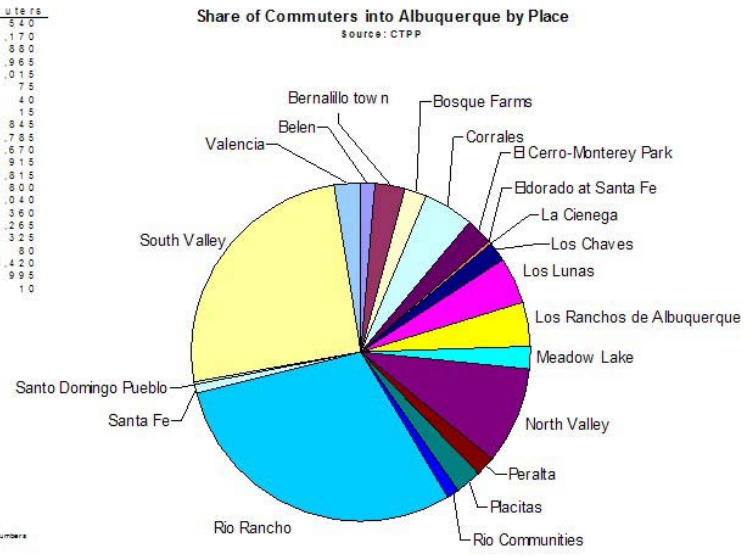
Meanwhile, negotiations with BNSF provided The NMDOT and MRCOG with a better sense of the tradeoffs between service and capital improvements. For example, much of this corridor is single track with sidings. Service scenarios that required commuter rail trains to meet and pass each other required more extensive capital improvements than those that did not. BNSF also provided an estimate of train travel times along the corridor which was utilized to help establish service parameters. The BNSF travel time data indicated that a 45 minute travel time (including stops) could be achieved between Belen and Albuquerque, and travel times of about 22 minutes between Albuquerque and Bernalillo. In order to serve the peak periods (as defined by the survey and MRCOG traffic count data), the train travel time information was used to identify the number of trains that could reasonably run during the peak period while avoiding meets (other than downtown Albuquerque) or severely impacting BNSF's freight operations or Amtrak's intercity rail service. Using these parameters it was determined that three trips could be made from Belen into Albuquerque during the morning peak period, and three from the north (two of which would originate in Belen and continue north to Bernalillo before making the return trip to Albuquerque). The same level of service could be provided in the reverse during the afternoon peak period.

In order to take these general service concepts and market information to a greater level of detail, more information was required. MRCOG obtained the next level of CTPP data in May of 2004. Figure 34 provides a summary of this information.

Figure 34. Year 2000 CTPP Share of Commuters into Albuquerque by Place

Residence Place	Commuters
Belen	540
Bernalillo town	1,170
Bosque Farms	660
Corrales	1,965
El Cerro-Monterey Park	1,015
Eldorado at Santa Fe	75
La Cienega	40
Los Alamos	15
Los Chaves	845
Los Lunas	1,765
Los Ranchos de Albuquerque	1,670
Meadow Lake	915
North Valley	3,815
Peralta	600
Placitas	1,040
Rio Communities	360
Rio Rancho	12,265
Santa Fe	325
Santo Domingo Pueblo	80
South Valley	10,420
Valencia	995
White Rock	10

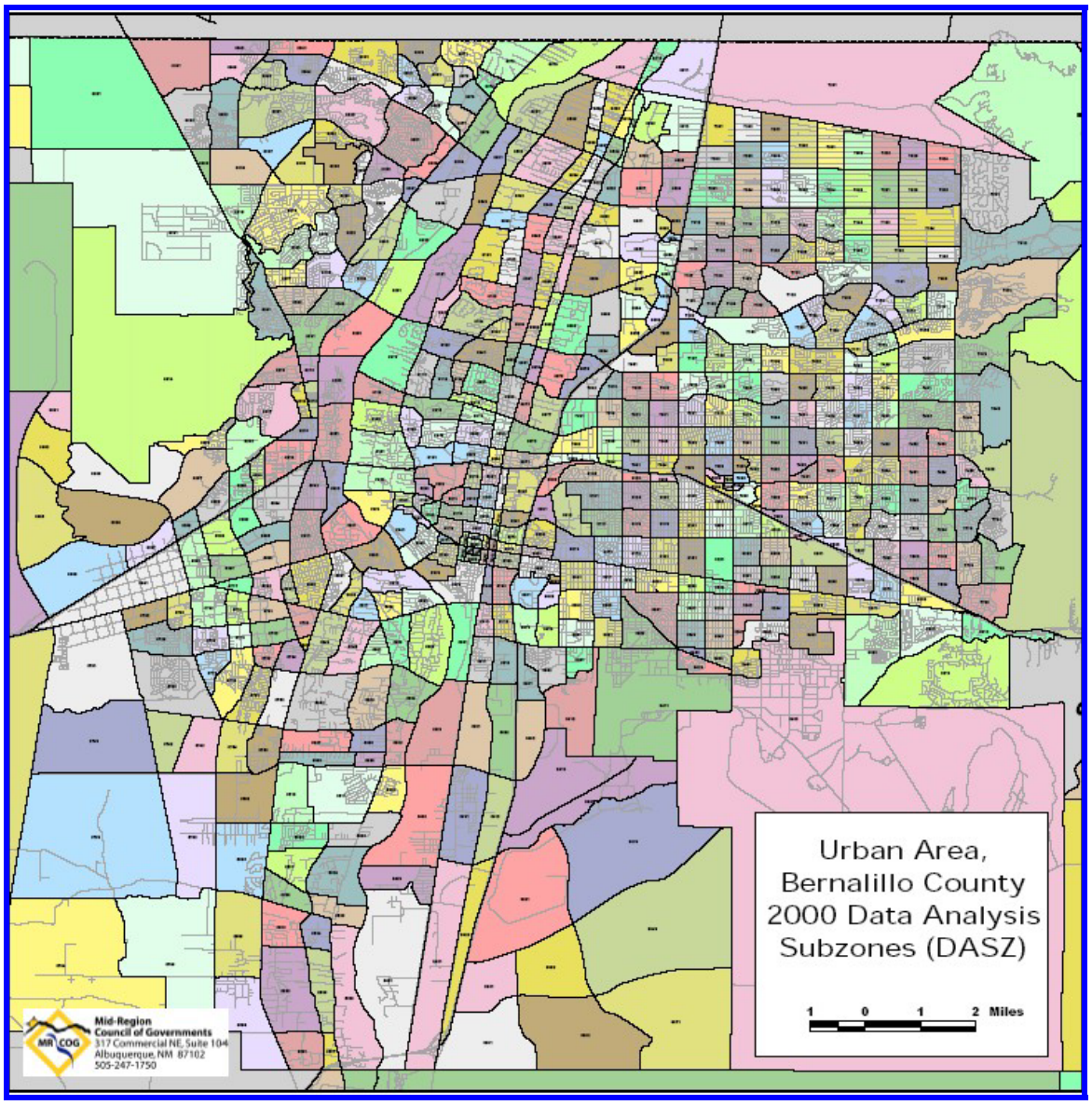
*Place data only includes census designated places with a population over 2,500. Numbers have been rounded.



While the previous CTPP data illustrated County to County commute flows, this release contained data disaggregated to smaller levels of geography. The commute flows into the City of Albuquerque are illustrated for many of the communities along the line. According to the CTPP, about 1170 workers commute from Bernalillo into Albuquerque. The number for Los Lunas is about 1,750.

Another release of CTPP information followed which had commute flows broken down into even smaller levels of geography called Data Analysis SubZones or DASZs. Figure 35 illustrates this zone structure for the Albuquerque urban region.

Figure 35. DASZs In The Albuquerque Urban Area

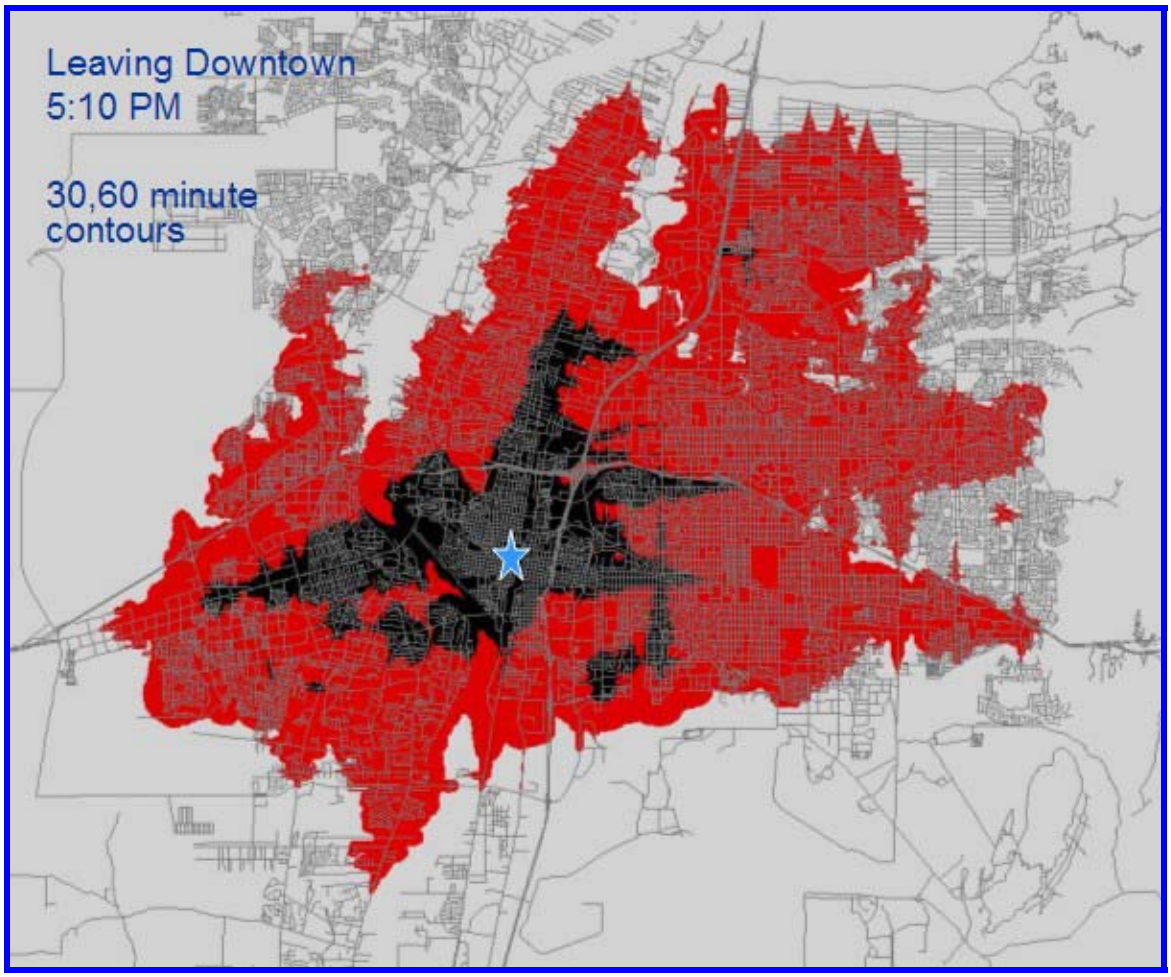


This level of CTPP data, which was available for the entire Phase I corridor includes commute exchanges between every single DASZ. This information provided a highly disaggregate base of commuter information to analyze very specific origins and destinations for the commuter rail service. This source data and trip tables from the MRCOG travel demand model are the primary sources of origin and destination data being utilized to identify markets.

Identifying total trip markets is one piece of establishing rider-ship estimates. The next part involves assessing the commuter rail service scenarios and alternative connecting service configurations, to help determine what portion of the total travel market the commuter rail service can capture. To assist with this piece of work the MRCOG maintains and utilizes a highly disaggregate model to assess markets for all types of projects. This model, called the Transportation Accessibility Model or TRAM, can

measure accessibility by mode of transportation or combinations of modes. It can also generate travel time contours based on real time transportation system performance by mode. For example, all the ABQride (formerly Suntran) bus routes and timetables are coded into the model. If the model is provided with the time of day and a trip origin, it can then generate travel time contours at any interval for any mode (or mode combinations) from the origin outward. Figure 36 illustrates an example of this capability.

Figure 36. Travel Time Contours Based on the ABQride Bus System

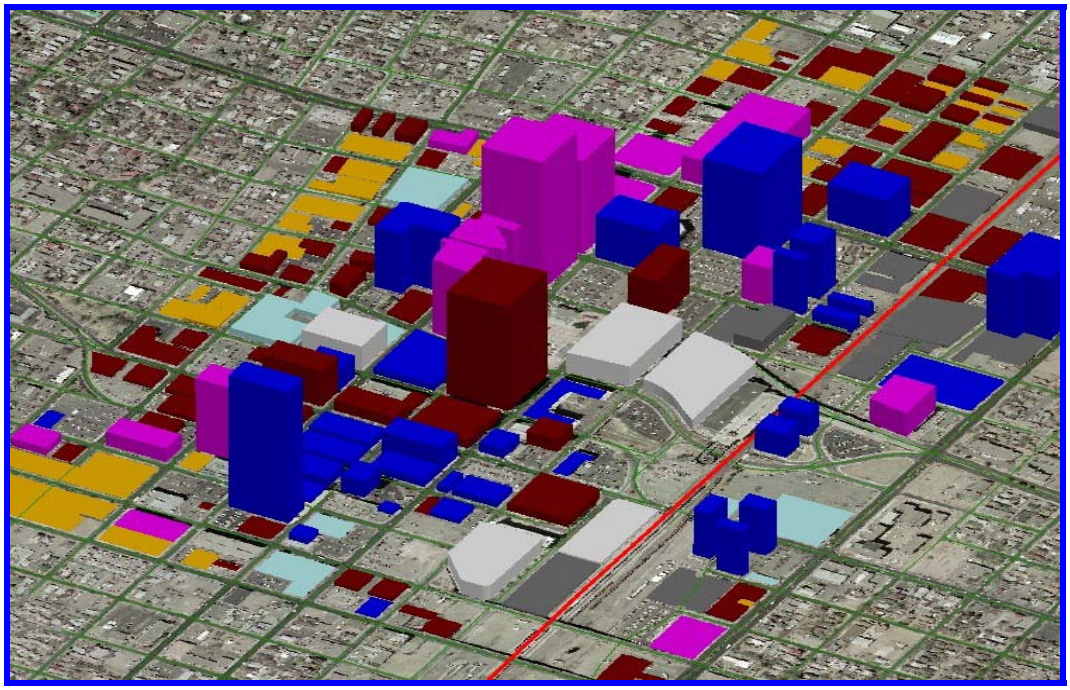


This figure illustrates the "accessibility" destinations from downtown Albuquerque using the modes walk and bus. The black area represents how far one could get in between 0 and 30 minutes, while the red area indicates how far one could get between 31 and 60 minutes. These contours can then be overlaid on Census data or future year forecasts of population or jobs for example to determine the markets that are available at different levels of accessibility e.g. population located with 25 minutes by bus from downtown Albuquerque.

To utilize this capability for the commuter rail service some modifications had to be made to the model to accommodate mode combinations involving autos and rail (to simulate park and ride). Also alternative commuter rail train schedules needed to be developed with timetables so that "real time" conditions could be simulated, like those presented in the picture above. For example, if a train leaves Belen at 6:30 a.m. and arrives in downtown Albuquerque at 7:15 a.m. it is important for the market and rider-ship analysis to know which destinations are within reach from the station by mode (walk, bus, shuttle). These modifications to the model have been completed. The other part of this work involved coding alternative, or new shuttle service into the scenarios (where it made sense) to better understand how the markets could change if good connecting shuttle services were available to or from the commuter rail stations. It is important to point out that ABQride (formerly Suntran) routes only cover a portion of the City of Albuquerque, so many stations outside of downtown Albuquerque have no fixed route, on demand, bus service today.

To identify potential markets that may benefit from better connecting services, the year 2000 Census data and MRCOG estimates of population and employment by DASZ we used. In some cases these data were disaggregated even using N.M. Department of Labor data and other sources to estimate the number of employees in specific buildings. Figure 37 illustrates this information for downtown Albuquerque.

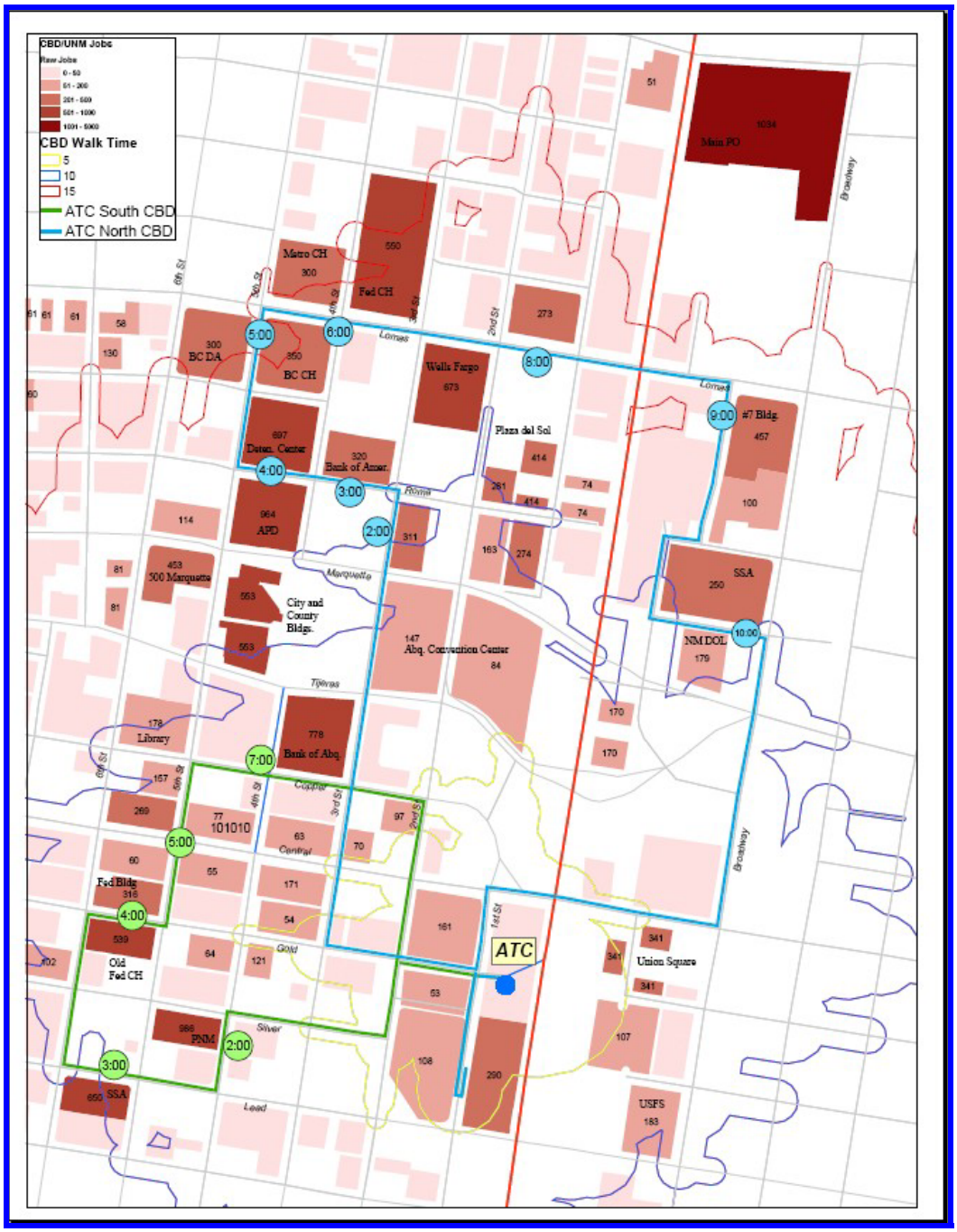
Figure 37. Employment in 3D by Block, Downtown Albuquerque



The TRAM was then used to generate walk and bus contours from stations, to determine which areas that had viable markets would not be accessibility by walking or the current bus system. These areas were identified as potential markets for connecting shuttles.

Shuttle routes could then be coded into the TRAM to test the additional market covered. Figure 38 illustrates some test shuttle routes serving downtown Albuquerque.

Figure 38. Test Shuttle Routes in Downtown Albuquerque



The shuttles are coded in with time points (time elapsed from the station). The figure also shows walk travel time contours in 5, 10 and 15 minute intervals.

Since there are multiple combinations of these alternatives that can be tested, along with multiple combinations of train schedules, a considerable amount of work remains to be completed before a final service design can be generated. Accessibility is being evaluated in this manner on the origin end (e.g. Belen, Los Lunas, Bernalillo) and the destination end (Downtown Albuquerque, UNM, Intel, KAFB, Albuquerque International Airport, Journal Center).

In order to complete the service design several steps remain. They include, concluding the work on shuttles, comparing commuter rail based travel time contours (with whatever connecting services make sense) to auto travel time contours, overlaying the results of the analysis on the trip tables (CTPP) and then applying mode shares. Out of this process will come rider-ship ranges, which will still be subject to a fare sensitivity analysis. In other words the rider-ship market may be within a particular range if the fares are set at $5.00 round trip, and another range if they are set at a higher or lower amount. Once this is determined it will be possible to generate revenue estimates based on fare box return, and operating costs based on the final train schedule and the labor, maintenance, fuel, costs required to support the schedule.

Public Involvement

This project has generated a great deal of public interest. To accommodate this interest and to keep interested parties aware of the status of the project the NMDOT and the MRCOG have developed a public involvement/awareness plan. There are three main components of this plan. One is to provide briefings to groups or associations on the status of the project. Another is to provide information to media outlets (print, radio, TV) and maintain a current status report on the MRCOG website (www.mrcog-nm.gov), and the final component is a series of public meetings organized around station sites in the communities along the line.

MRCOG has already provided a number of briefings to various groups and associations. The list below provides a sample of these groups.

N.M. Institute of Traffic Engineers
Amtrak Local Union Representatives (Engineers/Conductors)
American Society of Civil Engineers, New Mexico
American Society of Professional Engineers, New Mexico
New Mexico Board of Realtors
Economic Forum of Albuquerque
Urban Council of Albuquerque
Santa Fe Rail-yard Board of Directors
University of New Mexico Transportation Committee
New Mexico Economic Development Department Staff
Rio Communities Homeowners Association
Santa Fe Kiwanis Club
Mountain View Neighborhood Association
American Association of Retired Persons of Los Lunas

Belen Chamber of Commerce
Downtown Albuquerque Open House (Alvarado)
House Transportation Committee
Sierra Club Land Use & Transportation group
League of Women Voters
Friends of the Cumbres & Toltec Railroad
Belen Rotary Club
NAIOP/New Mexico Homebuilders
Albuquerque Hispano Chamber of Commerce Board of Directors

In addition the NMDOT and the MRCOG have provided briefings and presentations on the project to elected officials and government agencies. The list below provides a sample of these groups.

Valencia County Commission
Mayor Delgado & Staff City of Santa Fe
New Mexico Congressional Delegation & Staff (Wash. D.C.)
Santa Fe County Commissioners & Staff
Federal Railroad Administration (Regional)
Federal Transit Administration (Regional)
Congresswoman Heather Wilson
Santa Fe MPO Policy board
New Mexico Transportation Commission
Governor Paisano Sandia Pueblo
New Mexico Finance Authority Legislative Over-sight Committee
New Mexico Legislative Finance Committee
Santa Ana Pueblo Enterprise Board

The MRCOG has also provided regular briefings on the project to its standing boards and committees which contain staff and elected officials from the four county area covered by the MRCOG. And as noted earlier the MRCOG formed a Commuter Rail Task Force that includes elected officials from the following communities:

City of Belen
Village of Los Lunas
Valencia County
Bernalillo County
Sandoval County
City of Albuquerque
City of Rio Rancho
Village of Los Ranchos
Town of Bernalillo

There have been a number of stories in the print media on the commuter rail project over the course of the last nine months. This includes the Albuquerque Journal, the Albuquerque Tribune, the New Mexican, the Valencia County News-Bulletin. In

addition, Governor Bill Richardson held a press conference in February of 2004 at the Alvarado Transportation Center to describe the project status and schedule. This event, which included a demonstration ride up the line to Bernalillo and back, was well attended by elected officials throughout the corridor.

A series of public open houses were held in the various communities along the line to provide information on the commuter rail project and to solicit public comment and feedback on many elements of the commuter rail project including the service design, station design, station accessibility, fares, amenities etc. Meetings were held in September 2004, for Belen and Los Lunas, February 2005 for the Alvarado Station Site and October & November 2004 for the remaining station sites and adjacent communities.

Figure 39. Los Lunas Open House

Commuter Rail Project Status Phase II

The approach to implementing Commuter Rail between Bernalillo and Santa Fe is driven in large part by the pursuance of Federal New Starts (exempt) funding for a portion of the capital costs. In order to qualify the project for this funding category, the new starts process must be followed. The steps in the new starts process are as follows:

1. Complete a scoping report for the corridor and transmit the report to the Federal Transit Administration (FTA) for comment. The scoping report should include a problem statement that identifies transportation related issues in the corridor, it should also describe alternative solutions that will be investigated and identify ways the performance of the alternatives will be measured.

2. Once a scoping report is accepted by the FTA an Alternatives Analysis can be initiated. The Alternatives Analysis is typically a nine month to one year endeavor. Alternatives that may solve or address transportation issues in the corridor are analyzed at a level sufficient for State and Local officials to identify a locally preferred alternative. This analysis is multi-modal by design, and includes not only rail alternatives, but also roadway, park and ride and transportation system management (TSM) alternatives. Alternatives must be evaluated in sufficient detail, on a number of different levels (e.g. cost, environmental affects, cultural and historical affects, benefits, economic development affects, safety etc.) to provide a sound basis for deciding on a locally preferred alternative.

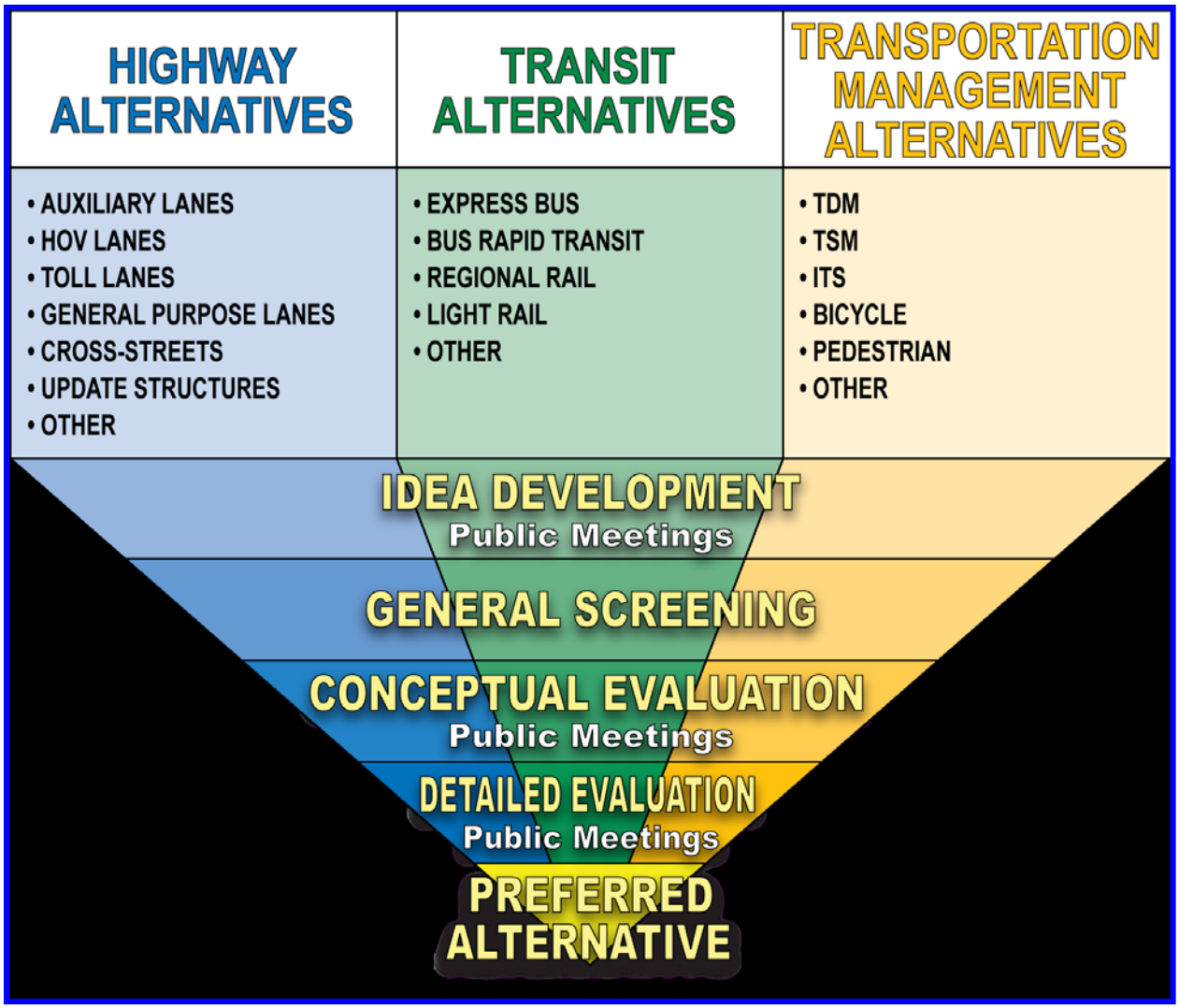
3. Once an Alternatives Analysis is completed (and approved by the FTA), the locally preferred alternative may then be advanced into the Environmental and Design process. The level of effort required at this stage will be based on the anticipated environmental consequences of implementing the locally preferred alternative. Typically the choice is between an Environmental Assessment (EA) and an anticipated FONSI (finding of no significant impact) or an Environmental Impact Statement (EIS) and a ROD (Record of Decision). This step will likely take between one and two years to complete.

4. Once environmental clearance is obtained for the preferred alternative, FTA may authorize Final Design and Rights of Way acquisition, and ultimately construction.

The NMDOT and the MRCOG prepared and submitted the required scoping report to FTA. FTA provided comments on the scoping report back to the NMDOT and the MRCOG. FTA's comments have been substantially addressed. The NMDOT and the MRCOG initiated the Alternatives Analysis in October of 2005. URS Griener was retained by the NMDOT and the MRCOG to assist with the development of the Alternatives Analysis report. Two public meetings were held (one in Santa Fe and one in Bernalillo) at this time to solicit input on the types of alternatives and technologies that should be considered in the Alternatives Analysis and to provide a forum to explain the process associated with the development of an Alternatives Analysis. A conceptual view of the Alternatives Analysis process is illustrated in Figure 40. Basically, a variety of transportation solutions and strategies are developed at the beginning of the Alternatives Analysis. These solutions include Highway Alternatives (the addition of general or special purpose lanes), Transit Alternatives including rail and express bus and

Transportation Management Alternatives including Intelligent Transportation Systems (ITS) and Travel Demand Management (TDM) programs.

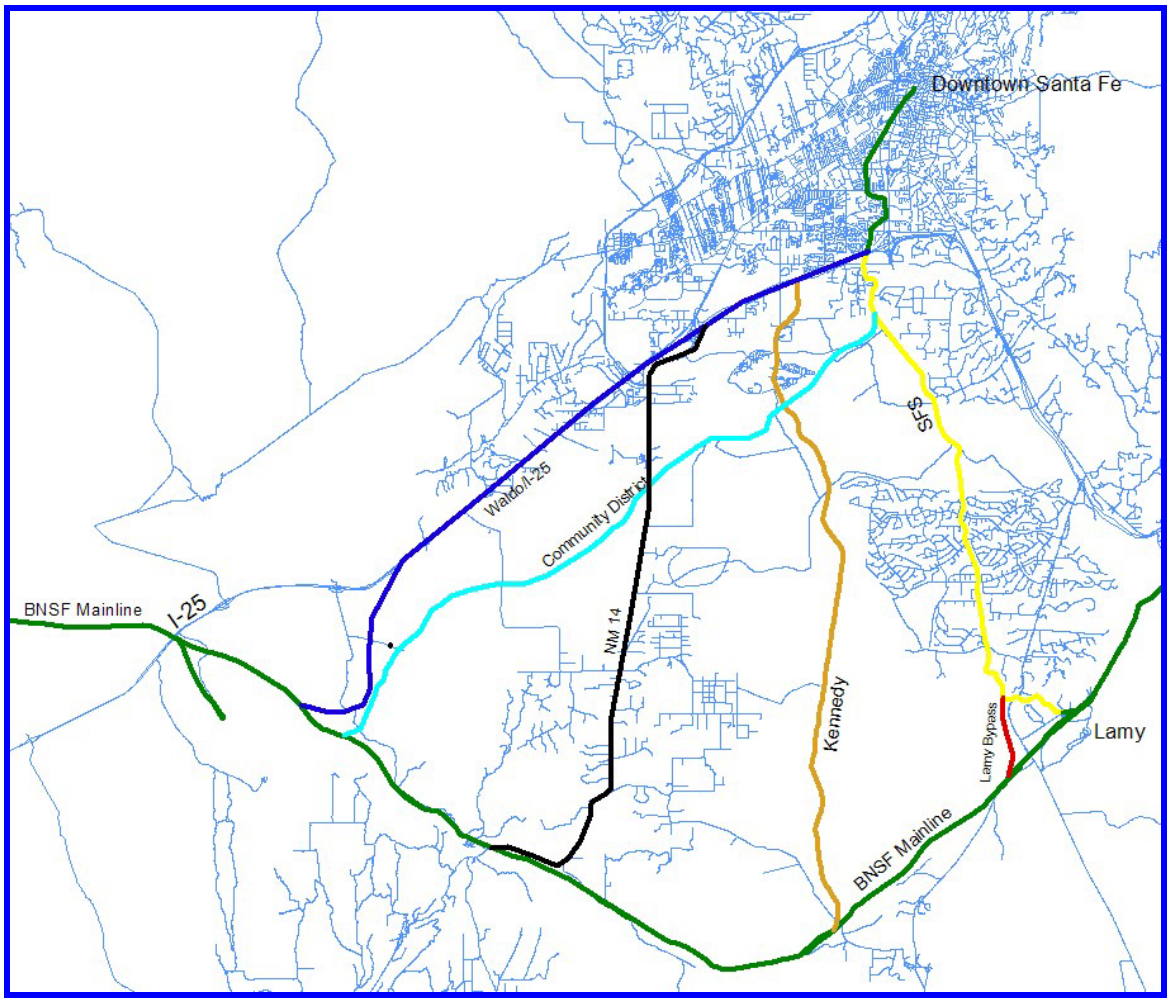
Figure 40: Alternatives Analysis Process



Note that alternatives can be developed which include elements from more than one of these categories like Express Bus on HOV lanes. As the Alternatives Analysis proceeds the goal is to screen alternatives, first at a general level, then at a conceptual level and then finally through a detailed evaluation. Alternatives are eliminated as the process moves forward based on increasingly detailed criteria.

After the initial round of public meetings (idea development) a range of alternatives were developed and subjected to the general screening process. The rail alternatives included in the general screening are depicted in Figure 41 below.

Figure 41. Rail Alternatives Considered in the Alternatives Analysis



All of the rail alternatives would utilize the existing BNSF line (shown in green) which runs north out of Albuquerque and crosses I-25 at the base of La Bajada hill. From this point the alternatives diverge from the BNSF mainline at various points to the east and then converge in the vicinity of the existing Santa Fe Southern (SFS) line and I-25. All of the rail alternatives would then utilize the existing SFS Line from I-25 into Downtown Santa Fe (this portion of the SFS line is also green). The Waldo/I-25 alternative depicted in blue diverges from the BNSF mainline just east of I-25, and then rejoins the I-25 alignment at the top of La Bajada hill. It then follows the I-25 alignment until it reaches the point where the SFS crosses I-25. The Community District alternative also diverges from the BNSF mainline just east of I-25. It then proceeds through the Waldo Canyon area and then parallels I-25 until it intersects with the SFS line. At this point the SFS line would be utilized into downtown Santa Fe. The NM 14 alternative diverges from the BNSF mainline at Cerrillos and then follows the NM 14 road alignment to I-25. It would then follow I-25 to the SFS and utilize the SFS line into downtown Santa Fe. The Kennedy alternative follows the old New Mexico Central railroad line. The old railroad bed is still visible in many places along this alignment (the tracks were dismantled in

1929) which diverges from the BNSF mainline near the old town of Kennedy and proceeds north through the Santa Fe Community College to I-25. It would then follow the I-25 alignment to the SFS rail line. The SFS line would then be utilized from I-25 into downtown Santa Fe. The final rail alternative considered would diverge from the BNSF mainline at the Lamy bypass (in red) and then utilize the existing SFS alignment into downtown Santa Fe. Unlike the other alternatives the SFS alignment is an active railroad today. However, the track is very old and vertical curves and structures limit train speeds to a maximum of 20 mph.

A second round of public meetings were held in February in both Bernalillo and Santa Fe to review details of the conceptual level of screening and to solicit opinion and information on those alternatives being carried forward into the detailed level of analysis.

At this point all of the alternatives have been through two rounds of screening. As a result of this screening process all but two of the rail alternatives have been eliminated. The two still under consideration include the SFS (with the Lamy Bypass) and the Community District alternative. In addition to the remaining rail alternatives, the highway-only (general purpose lanes), enhanced bus service, and bus rapid transit/high-occupancy vehicle lanes alternatives are also being carried forward to the detailed evaluation level.

A report on the initial range of alternative alignments and technologies has been produced and is available through the NMDOT. Other elements of the study that have been completed include the initiation of a public involvement plan and the identification and the collection of information and data to feed the evaluation process. This includes information on land ownership patterns, land use, zoning, topography, historic and culturally significant sites, plant and wildlife habitats, noise air quality, transportation system performance, future year population, employment and transportation demand etc.

As the process moves forward alternatives will be screened one more time using the more detailed evaluation data and criteria. This information will be documented as well as the decision making process that will need to be followed to arrive at a locally preferred alternative. Once a locally preferred alternative is generated out of this process the Alternatives Analysis document will be provided to the FTA for review and comment. The public, elected officials, and other stakeholders will be consulted regularly throughout this process to insure that a proper mechanism is in place to incorporate concerns and comments into the development of the Alternatives Analysis.

Commuter Rail Project Financials

A budget of $75 million has been established for Phase I capital cost. This figure was arrived at by NMDOT and the MRCOG utilizing information from a number of sources. Track, signal and crossing improvements estimated at $30 million have come primarily from negotiations with the BNSF, and are based on the level of improvements required to run commuter rail service without adversely impacting their freight operations. This estimate is based on the State leasing the line from the BN&SF and not on an outright purchase, which would likely cost more. The NMDOT and the MRCOG have had HDR

review cost estimates from the BN&SF to insure that they are in line with comparable railroad improvements.

The acquisition of rolling stock (engines and passenger cars) was estimated at around $30 million. This figure was based on the purchase of up to 10 cars at approximately $2.2 million each, and 4-5 locomotives at $1.5 $2.0 million each. The $2.2 million figure per car was based on recent comparable purchase prices for passenger cars from other commuter rail service providers. The locomotive pricing is based on the acquisition of rebuilt locomotives (as opposed to new) and recent sale prices of these vehicles. The contract negotiated with Bombardier for 10 cars came in at approximately $22 million with an additional $900,000 option for spare parts. The four engines acquired from Motive Power cost approximately $9 million with a $600,000 option for spare parts. About $10 million has been set aside for station development, which works out to about $1.1 million per station if all 9 stations are constructed. This figure will likely vary from one station to the next, because some are more complicated than others. The $1.1 million was based on a platform costing in the range of $500,000.00, parking about $300,000 and land acquisition about $300,000. The remaining $5 million was designated for a maintenance and inspection facility. Commuter rail equipment must be inspected and maintained on a regular basis. Many of these activities require a covered area, a pit under the tracks so equipment that is on the underside of the engines and cars can be accessed for inspections and maintenance, tools to perform the work and spare parts. The $5 million figure was based on the cost of the maintenance facility for the Trinity Rail Express commuter service in the Dallas/Fort Worth area.

In December of 2005 The Sandoval County Commission approved $10 million for the commuter rail project to assist in the acquisition of rolling stock, track and signal improvements in Sandoval County and to provide additional resources for Station Development in Sandoval County. These funds will be utilized to add additional value in these areas. The Sandoval County Commission also approved an additional $6 million to provide for connecting transit services in Sandoval County.

Annual operating costs are estimated at between $8 and $12 million. There is a range in this figure because these estimates were formulated without a specific service design in place. The range was established by reviewing other commuter rail annual operating budgets (Trinity Rail and Altamont Commuter Express) and the service provided (trains, and train miles per day) and then developing an estimate based on a lower and higher level of train service. A portion of these costs will not vary based the service provided. Liability insurance, for example, will likely cost in the range of $1.5 - $2.0 million per year, irregardless of the number of trains running.

To cover the capital costs of the Phase I the NMDOT has programmed $75 million from the GRIP program. This action was incorporated into the MRCOG Transportation Improvement Program by the MRCOG Metropolitan Transportation Board in June of 2004 and approved in the Statewide Transportation Improvement Program by the New Mexico Transportation Commission in July of 2004. As noted above Sandoval County has approved an additional $10 million for the project.

The NMDOT and the MRCOG have been discussing revenue sources for the annual operating costs as well. Congestion Mitigation Air Quality (CMAQ) funds, which are distributed by formula from the Federal Highway Administration to the NMDOT, and a portion further distributed to the MRCOG, have been identified as a primary revenue source for the first couple of years of operations. As a result of these discussions the NMDOT has begun the process to program these federal funds to cover the first three years of operating costs. These funds are expected to be approved by the MRCOG in April and the New Mexico Transportation Commission in May of 2005. For the years beyond this initial period, Regional Transit District (RTD) and state funds are anticipated to be a major source of operating revenue. The MRCOG spearheaded the effort to create a RTD for this region and as a result of many months of effort the Mid Region RTD was officially constituted at the March 2005 meeting of the New Mexico Transportation Commission. Enabling legislation for the formation of RTD's was passed by the New Mexico State Legislature and signed into law by Governor Bill Richardson in the spring of 2003. A Regional Transit District (RTD) under this legislation is an organization devoted to planning and providing public transportation services on a regional basis. The Legislature created Regional Transit Districts in 2003 to provide a framework for local governments to cooperate on regional transit projects. Two or more municipalities, counties, pueblos, tribes, or other local governments can agree to form a RTD and work together to develop a transit network that meets the needs of the area. RTDs are governed by the communities they serve and plan, finance, and operate transit services that serve an entire region. Regional transit services can include passenger rail, fixed-route bus service, and specialized "para-transit" services for seniors, people with disabilities, Medicaid patients, and Welfare-to-Work participants. With a regional orientation, RTDs can provide a wider range of travel opportunities and regular service between communities in a region than local transit operators.

In the regular 2004 session, the legislature voted to give local governments new gross receipts tax authority (up to ½ percent) to fund regional transit districts (RTDs). Revenue from that local-option tax can be used to fund passenger rail and other local transit services provided by RTDs such as the one being created by MRCOG in this region and others around the state. The MRCOG anticipates that an RTD that includes most of the local governments in this region will be formed by the end of the calendar year. Several local governments have already taken action on this issue by passing resolutions supporting the creation of an RTD for this region and authorizing the development of an inter-governmental agreement to constitute an RTD.

Specific capital and operating cost estimates have not been generated for Phase II, but a general estimate of between $200 and $250 million for the capital component has been derived, based on results from previous studies, and current comparable cost estimates for track improvements, station development and the acquisition of rolling stock. The Alternatives Analysis mentioned earlier in this report will provide more specific cost estimates for alternative evaluated. A primary reason for pursuing federal funds on this piece would be to secure a high level of federal participation in the Phase II capital costs.

The NMDOT and the MRCOG are pursuing $75 million in New Starts Exempt (or Small Starts) funding and a minimum of $25 million in other federal earmarks for the Phase II capital expenses.

To many people the costs associated with this project may seem too high. But all major transportation investments have become very expensive. The BIG I reconstruction ended up costing almost $300 million. The reconstruction of the Coors/I-40 Interchange (a single interchange) is expected to cost $90 million. For about this same amount of money, this region can acquire a major transportation service that will connect many of the communities up and down the Rio Grande valley. Compared to other recent commuter rail start ups, the Phase I project is a bargain. Capital costs for new commuter rail service are typically in the range of $5 - $7 million a mile. Phase I capital costs are less than $2 million a mile. This is because the track is in relatively good shape, and freight movements along the line are minimal compared to many other lines desired for commuter service. The Regional Transit Authority in Denver is proposing new commuter rail service in the Denver area. The average capital cost per mile for the two lines is estimated between $7 and $10 million per mile. Light rail lines are typically on the order of $25 to $30 million a mile.

Voters in Denver recently (November 2004) approved this rail initiative by voting to impose an additional half percent sales tax (over the half percent already on the books for public transportation. This tax will generate about $4.7 billion to construct 120 miles on six new rail lines over the next 10 years. This initiative passed with fifty eight percent of the vote. This past November Phoenix voters approved (by the same margin) an additional half percent sales tax to construct and operate a 19 mile long light rail line between Tempe and Downtown Phoenix. This project is estimated to cost $1.3 billion.

Implementing commuter rail between Albuquerque and Santa Fe has been discussed, studied and debated for over 30 years now. This project provides the State and citizens of New Mexico with the opportunity to implement this system.